Employability and Mobility of Bachelor Graduates in Europe

Key Results of the Bologna Process

Harald Schomburg and Ulrich Teichler (Eds.)

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PREFACE

Since the late 1990s, cooperation among European countries has substantially intensified in undertaking similar higher education reforms. The efforts to establish a convergent system of a cycle-structure of study programmes and degrees has captured the minds of actors and experts and have led to a lively debate about the desirability and feasibility of the reform programme. The public debate is lively and controversial because it is not just a matter of quantitative and structural changes. Rather, very ambitious aims are pursued with the restructuring of the higher education system. It was emphasised from the outset of this reform programme that the new Bachelor-Master system and various accompanying measures should help to increase student mobility. In the subsequent years of the "Bologna Process" a second aim became relevant: the structural and the curricular elements of the reform should contribute to a closer relationship between higher education and subsequent employment, often called "employability".

The public debate addresses the rationales of the reform as such: What type of higher education do we want? What should be the future role of student mobility? What kind of links between higher education and the world of work are desirable and questionable? But over the years, the discourse changed and questions concerning implementation and impact have gained momentum: To what extent and how has a cycle-structure of study programmes been established? What relationships between study and subsequent employment have emerged? Can both developments be seen to be in tune with the objectives of the Bologna reform?

The information base on the developments of student mobility and on employment in the framework of the Bologna Process is quite limited. The discussions as to whether the Bologna Reform is a motor or stumbling block for increasing mobility and desirable "employability" cannot draw from a wealth of empirical findings.

This book aims to show what information can be drawn from graduate surveys which are periodically undertaken in various European countries as regards the implementation and the results of the Bologna process. Those responsible for national graduate surveys were asked to concentrate on the findings of the most recent surveys and to present information that can answer three major questions:

- What share of Bachelor students and all students have international experience in the course of their study?
- How many Bachelor graduates, possibly sub-divided into Bachelors from universities and from other higher education institutions and programmes, opt for employment and how many for further study?
- How is the employment situation of Bachelor graduates – in general and notably of university Bachelor graduates? How much do their income and their positions differ from those of graduates from Master programmes or from – old or new – long single-cycle study programmes? How different or similar are the contractual relationships with their employers and the links between level of degree and level of position and the links between the substance of study and their work tasks? Finally, are Bachelor graduates satisfied with their employment situation compared to other graduates?

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Researchers at the International Centre for Higher Education Research of the University of Kassel (INCHER-Kassel – Internationales Zentrum für Hochschulforschung), Germany, asked colleagues from nine other countries to contribute to this volume. Countries were chosen where the Bologna Process has sufficiently progressed to undertake a meaningful interim account and where national graduate surveys are conducted periodically: Austria, the Czech Republic, France, Hungary, Italy, the Netherlands, Norway, Poland and the United Kingdom, as well as Germany, the country where this comparative study was initiated.

The authors first presented their findings at an international conference arranged for this purpose. The conference on "Employability and Mobility of Bachelor Graduates" was held in Berlin from 30 September to 1 October 2010. Organised by INCHER-Kassel, it was sponsored by the German Federal Ministry of Education and Research (BMBF – Bundesministerium für Bildung und Forschung) and supported by the German Rectors' Conference (HRK – Hochschulrektorenkonferenz). The conference also helped to explore opportunities for future cooperation in analysing the findings of graduate surveys. The conference was viewed as an eye-opener to see how findings could be organised and presented in a more fruitful way as meaningful evidence for the policy discourse on higher education reforms.

The editors of this volume are grateful to the authors of the country chapters for their readiness to structure and interpret their findings along the lines of the questions above. Also, their willingness to take on such a task within a relatively short period is highly appreciated. The editors also wish to express their gratitude to the sponsor and to the official supporter of the conference. The BMBF did not only provide generous financial support, but also – together with the HRK – helped sharpen the focus of this dialogue between actors and researchers. This was also true of many persons contributing to the discussion.

Finally, the editors are indebted to the many persons who supported the organisation of the conference, the analysis of the German case, and the comparative analysis, and the preparation of this volume. Our gratitude goes to the team at INCHER-Kassel and more especially to Lutz Heidemann, Katharina Benderoth, Constanze Engel, Susanne Steinke, Vera Wolf, Pia Wagner, Florian Löwenstein, René Kooij, Martin Guist and Christiane Rittgerott, as well as to the students who supported the team. The editors thank Roman Schmidt, Wibke Gröschner and Vasileia Skrimpa for their tireless efforts before and during the conference. Paul Greim, Christina Keyes and the staff from B.Effective were reliable partners in publishing this volume and organising the international conference in Berlin.

We expect that further analyses of the impact of European cooperation in higher education reforms on graduate employment will be undertaken in the future. Other issues are salient. Some themes can be analysed in a better way once the implementation of the reform has progressed. And graduate surveys may become more elaborate and comparable in the future and, thus, provide more relevant evidence for the respective public debates.

Kassel, January 2011
Harald Schomburg and Ulrich Teichler

ULRICH TEICHLER

BOLOGNA – MOTOR OR STUMBLING BLOCK FOR THE MOBILITY AND EMPLOYABILITY OF GRADUATES?

INTRODUCTION

A decade of European reforms

The first decade of the 21st century is characterised by a lively debate about the future of higher education and by collaborative efforts to change the national systems of higher education in Europe in a similar direction. In the "Bologna Process", structural changes are the focal operational arena of higher education reform. Steps have been taken since the late 1990s to replace or complement the variety of national patterns of higher education systems by a convergent cycle-model, often called the Bachelor-Master model.

When the Bologna Declaration was signed in 1999 by the ministers in charge of higher education in most European countries, increase and improvement of student mobility was underscored as the major rationale for this structural reform approach. Notably, it was assumed that the new model could make higher education in Europe more attractive for students from other regions of the world and facilitate intra-European mobility.

In the course of the Bologna Process, a second rationale has been emphasised the structural reform and various other measures should contribute to closer relationships between higher education and the world of work. It was obvious from the outset that the new structures and study programmes and degrees challenges established relationships in this domain and that quantitative-structural changes in higher education had to be accompanied by curricular reforms. The recent debates and activities – often summarised in the catchphrase "employability" – indicate that a major movement has been triggered of reconsideration and reshaping the way higher education addresses the subsequent employment of the graduates, i.e. beyond the needs of the structural reform.

When the Bologna Process was launched, one expected that most of the reforms were likely to be implemented within a decade. This was symbolically stressed by calling 2010 the year of the start of the "European Higher Education Area". Even though most actors and experts agreed that such a substantial reform agenda needed a longer period of decision-making and implementation, 2010 was often taken as a kairos for interim accounts of the Bologna Process.

Structural change: the operational aim

As regards the changing patterns of the higher education systems in Europe we note a varying speed in the implementation of the Bachelor-Master structure. Indi-

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vidual countries varied more than was expected in determining the length of the study programmes, the conditions of progression from the first to the second cycle, the role of the various types of higher education in the provision of first-cycle and second-cycle programmes and the fields of studies excluded from this cycle-model. Of course, questions emerged concerning how such a structural change of study programmes up to a Master-level was linked to the overall quantitative and structural development in higher education, for example to changes in access and admission and to practices of regulating the conditions for the transition from the Bachelor stage to the Master stage. Furthermore, doctoral training was declared as a third stage in the mean time, though no convergent steps are advocated as to how to shape such a third cycle and how to link it to the preceding cycles. Finally, a controversial debate emerged about the changing functions of higher education in the process of such a structural change. Many academics called into question the desirability of short university programmes as an entry qualification to the labour market.

Enhancing student mobility: the core objective of the Bologna Process

As regards the enhancement of student mobility, increasing mobility at the time when the Bologna Declaration was signed was greatly appreciated, and the increase in student mobility could be seen as an uncontroversial goal that was high on the political agenda. But there was a need to specify the directions of mobility: should only inward mobility of students from other parts of the world be stimulated, or should outward mobility of students from European countries to other parts of the world also be stimulated? What role should "diploma mobility" (i.e. studying for the whole programme in another country) play vis-à-vis temporary mobility in the course of study? How varied should the flow patterns between countries be, and is a there a virtue in reciprocal flows? Moreover, the conditions of mobility were constantly being debated: What modes of funding are desirable? What are the opportunities and limitations in the encouragement of the recognition of study abroad? Last but not least, the real trends of student mobility and the underlying causes became an issue of debate.

Available data suggest that the number of students from outside Europe choosing European countries has increased and the increase beyond the general trend of worldwide student mobility suggests that higher education in European countries has become attractive for students from other regions of the world. But the public debates focused on the question as to whether intra-European student mobility was really increasing substantially and whether higher education reforms in Europe had really served to facilitate intra-European student mobility or on the contrary turned out to be stumbling blocks . Those supporting the latter view argue that the shorter study programme up to a first degree and that the accompanying measure of introducing or spreading a credit system as well as various activities towards a detailed structuring of the Bachelor programmes have undermined the readiness of students to study abroad for a period and have reduced their chances of having their study achievements abroad recognised upon return.

Enhancing "employability": the increasingly relevant additional objective

As regards employment, it was clear from the outset that the introduction of a convergent cycle-structure of study programmes and degrees would provoke the established links between higher education and the world of work most strongly in one respect: What would be the role of Bachelor programmes as regards preparation for the world of work in countries, fields of study and occupational areas and higher education agenda where no study programmes of a similar length existed previously? One could not be surprised if employers were uncertain whether and in what areas they should employ graduates. One could expect controversial debates in universities that traditionally offered only long study programmes leading to Master-equivalent degrees: Obviously, uncertainty prevailed in how to develop professionally relevant short study programmes and how one should strike the balance between their functions to lay the foundation for professional work and advanced study. Finally, one could not be surprised that students were uncertain as to how to handle these new options. These challenges were anticipated in the Bologna Declaration of 1999 in the often quoted sentence "The degree awarded after the first cycle shall also be relevant to the European labour market."

Over the years, however, "employability" was constantly extended in the process of the Bologna Process. Universities were called upon to reflect more strongly on the "learning outcomes", the "competences" to be enhanced through the study provisions and conditions and the impact of study programmes on graduate employment and to draw conclusions for the design of curricula. "Qualifications frameworks" were developed in the Bologna Process at the European, national and disciplinary levels in order to ensure a certain similarity of curricular thrusts and strengthen the perspectives of "learning outcomes", "competences" and "employability". This triggered a lively debate not only about the suitability of these kinds of operations and concepts, but also about fundamental issues of the teaching function of higher education: To what extent should study programmes aim to serve specialised and professional knowledge and to what extent should "generic skills" or "key qualifications" be promoted? To what extent should curricula, teaching and learning be designed to prepare for employment or be geared to employers' expectations, or to what extent should they emphasise other aims, i.e. academic quality and pursuit of knowledge for its own sake, cultural enhancement and civic responsibility, or the ability to address expectations critically and innovatively in order to become agents of change. This debate was often polarised by calls that higher education should adapt to the presumed demands of the "knowledge economy" and by calls to resist a sell-out of the university to instrumental pressures and thereby uphold the principles of the European university of being both driven by rationales of academic reasoning and professional relevance and to learn to act professionally and question the existing professional, economic and societal settings.

Limited information about structural change, mobility and graduate employment

In the public discourse about the process of the Bologna reform and the changes occurring in the key areas of this reform endeavour, we observe an enormous variety of statements about the facts. With all due respect to the interesting arguments that are presented, one can argue that the Bologna discourse is not very evidence-based. For example, we hear that the countries have established similar Bachelor-Master models or have gone in quite divergent directions. We are told that student mobility has substantially grown in the Bologna Process or that the Bologna Process hampers mobility. We hear claims that the new pattern of degrees is widely accepted on the labour market or that university Bachelor graduates face extreme difficulties in finding employment.

Many evaluation studies have been commissioned at the European level and in the individual countries and many scholars have taken initiative to analyse this reform process and its consequence for higher education. But many of these studies merely collect the views of actors and experts who present sophisticated guesses rather than reliable information. Also, many studies analyse statistics, surveys and other empirical sources which are not designed in such a way as to give convincing answers to the questions which must be posed in the Bologna Process. To take a well-known example: The currently available student statistics for Europe do not provide figures about the number of Bachelor and Master students and do not tell us how many students study in another European country for a semester or a year.

A secondary analysis of national graduate surveys

Enormous efforts will be needed in the future to ensure that reform efforts in higher education such as the Bologna reform can work as evidence-based policies: that a basis will be created for regular stock-taking and that the information thus provided and the analysis thus enabled will contribute to a reflection on the preceding aims, processes and result and to a creative revision of future aims and activities. First, more systematic collection of information will be needed. Second, more efforts will be needed to harmonise national data collection in order to improve the opportunities of creating Europe-wide databases or to undertake comparative studies on the basis of comparable sources. Third, the principles and details of information collection must be updated more quickly in order to get responses to new questions or gain relevance in the reform processes. To take an example: The stimulation of temporary mobility in Europe is seen as one of the most important and successful policy initiatives for more than two decades, but we still have to guess whether we have about 300,000 or 600,000 temporarily mobile students in Europe this year.

The establishment of a proper information base across Europe for each of the major themes addressed here could take a decade or more, once the view that a good information basis should be established has been widely accepted. Therefore, it remains important to examine existing sources of information to see whether

they can provide a better quality of information than the type of information and analysis which seems to have currently the strongest influence on public discourse.

This volume is the result of the collaboration of researchers in various European countries who are active in undertaking graduate surveys. They have tried to identify the potentials of surveys on the employment of former higher education students in order to respond to some key questions raised in the stock-taking concerning what higher education looks like after some years of the Bologna reform.

As will be shown below, graduate surveys are not only a suitable source for taking up questions which arise in the context of the "employability" debate. They can also comprise information on mobility. Various graduate surveys ask retrospectively about experiences in the course of study and, thus, are in the position to establish how many graduates have spent a study period in another country. Moreover, various graduate surveys provide information about international mobility after graduation – an issue that is not directly addressed in the discourse about the Bologna reform, but that is certainly an indicator for the potential impact of student mobility.

The aim of this chapter

The aim of the introductory chapter of this volume is two-fold. First, an account of the Bologna Process is presented to identify salient issues which must be taken into consideration when analysing the potentials of graduate surveys to provide meaningful information for the Bologna Process and in this framework notably information on the employment of Bachelor graduates. Second, a review is undertaken of available sources of information, and notably of graduate surveys, in order to identify their value in enhancing the information base as regards the Bologna Process.

THE BOLOGNA THRUST

The Bologna Declaration

On the occasion of an anniversary of the Sorbonne University in Paris in 1998, the ministers of education of France, Germany, Italy and the United Kingdom declared that they would establish a "harmonised" structure of study programmes and degrees. As the signing of the *"Sorbonne Declaration"* was criticised as an isolated attempt of a few European countries, but the concept found widespread support in other European countries as a great leap forward, efforts were made to establish a broader basis for further action.

In Bologna (Italy) in June 1999, the ministers of 29 European countries signed the "*Bologna Declaration*", according to which a cycle structure of programmes and degrees should be established and a "European higher education area" should be implemented by the year 2010. Subsequent ministerial *follow-up conferences* to monitor, specify and stimulate this process were held in Prague (Czech Republic) in 2001, Berlin (Germany) in 2003, Bergen (Norway) in 2005, London (United Kingdom) in 2007, Leuven (Belgium) in 2009, this time jointly prepared by the governments of the Netherlands, Belgium and Luxembourg, and Vienna (Austria)

and Budapest (Hungary) in 2010. In the meantime, 47 countries joined this cooperation venture.

The major supra-national actor of the "Bologna Process", in contrast to that of the process to establish a European Research Area, is not the European Union; rather, the ministers of individual countries jointly promote this process. The European Commission, the governmental body of the European Union, was caught by surprise in 1998 because the four ministers who signed the Sorbonne Declaration advocated exactly what they had forbidden the European Commission to do in the past: to challenge the variety of higher education systems in Europe.

Major aims and operational objectives

The Bologna Declaration, in its core, calls for the establishment of a *cycle system of study programmes and degrees* all over Europe: a first study programme leading a degree which is called Bachelor in the Anglo-Saxon World, and a second leading to a Master.

The ministers of the European countries involved in the Bologna Process *never agreed on a common model as regards length of the study programmes*. As will be pointed out below, three-year Bachelor and two-year Master programmes were established most frequently, and five years of study up a Master is the most widespread model, but room for manoeuvre remained for other options (see Reichert & Tauch, 2003, 2005).

Over the years, the Communiqués signed by the ministers in the follow-up conferences emphasised that *doctoral studies* should be seen as the third stage of the Bologna model. However, no concrete agreements were reached as regards its nature, the status of doctoral candidates or similar salient issues.

The Bologna Declaration also suggested *accompanying measures* to reinforce the possible impact of the structural convergence of higher education systems in the European countries. First, a *credit system* should be introduced everywhere in order to measure study achievements cumulatively and to have a common "currency" for decisions to recognise the study achievements abroad upon return of the temporarily mobile students. Secondly, a "*diploma supplement*" should be awarded to all students upon graduation in order to provide easily readable and internationally understandable information on the national higher education system, the study programme and the individual students' achievements. Thirdly, close cooperation between the European countries was advocated in evaluation activities, in this context often called "*quality assurance*" (cf. Cavalli, 2007).

In the Bologna Declaration, this structural reform and the accompanying measures are called for to serve the major aim of *contributing to student mobility* which is:

– to increase the attractiveness of higher education in Europe for students from other parts of the world, and
– to facilitate intra-European mobility.

Without explicitly stating so, the Bologna Process aims primarily to increase the following modes of student mobility: (a) inbound mobility for the whole degree

programmes from other parts of the world, and (b) temporary (between three months and a year) inbound and outbound mobility between the European countries (see Teichler, 2009b; Wächter, 2008).

It is also clear that the Bologna reform programme considers the cycle system of degrees as a virtue for the options of the students and for a better articulation between the provisions of the higher education system and the needs of society. *Short study programmes should be made more attractive*, and students should have more *flexibility in the course of their study career* whereby study could be more easily stretched over the life course ("lifelong learning").

In the course of the years, the *Bologna agenda seems to have broadened*. As the Bologna Process turned out to be a motor of change in higher education in many European countries, many actors aim to widen the agenda either by suggesting that the European governments add new themes to the Communiqués of the follow-up conferences or, less officially, to the official conferences held under the auspices of the Bologna Follow-up Group (BFUG, the coordination group between the ministerial conferences), or by just reinterpreting the Bologna discourse as including their preferred themes. For example, the European Commission published various papers in which it claimed that the philosophy underlying the Lisbon Process was more or less identical to that underlying the Bologna Process (cf. European Commission, 2010).

There is no doubt, however, that another major theme of the Bologna Process emerged and grew over time in addition to the structural theme (the stage structure of study programmes and degrees) and the theme of student mobility: that of the *substance of the study programmes*, notably the major curricular thrusts and the relationships between study and subsequent graduate employment. "Qualifications frameworks" and "employability" became the most frequent terms referred to in order to underscore the relevance of this second major theme (see Haug, 2005).

The debates and policies in the framework or the context of the Bologna Process spread beyond those themes. Joint activities of *"quality assurance"* extended beyond the initially envisaged objectives. Various themes were added to the list: *widened access* to higher education and permeability between the vocational training system and higher education, as well as the *"social dimension"* of higher education, notably in terms of widened access and equality of opportunity, but also of the financial conditions for study and the actual study conditions.

Preceding developments and policies

The Bologna Process is a clear step forward towards closer cooperation on selected issues of higher education. But it was not completely new: neither in terms of joint action between different countries in higher education nor in terms of the themes addressed. Rather, repeated activities have been undertaken since the end of World War II in the various European countries to counteract the idiosyncrasies and the relative isolation of national systems of higher education. Such policies were promoted by different *supra-national actors* as a quick glance on the five most influential activities within four stages of development (see Teichler, 2010).

In the first stage, efforts were made to increase the *mutual understanding* between the various European countries. In this framework, activities to *facilitate student mobility* played a dominant role in the hope that more detailed knowledge of other countries would dilute prejudices and increase sympathy for other ways of life and thinking. In Western Europe, the *Council of Europe* has been active since the early 1950s in facilitating mobility through conventions signed and ratified by individual countries for the *recognition of study* – more precisely for the recognition of prior education as entry qualification to higher education, of periods of study for mobile students during the course of study, and of degrees for mobile graduates. Similar activities have been undertaken by Eastern European countries since the 1970s for all European countries through cooperation between the Council of Europe and UNESCO, and in 1997 through the Lisbon Convention for the recognition of studies initiated again by the Council of Europe and UNESCO, this time in cooperation with the European Commission (see Teichler, 2003).

In the second stage, since the 1960s, most Western European countries and market-oriented economically advanced countries outside Europe have collaborated in the search for the best ways to stimulate and accommodate the *quantitative expansion of student enrolment* in higher education, thereby both aiming to *contribute to economic growth and to the reduction inequalities of educational opportunity*. The OECD (Organization of Economic Co-operation and Development), a think tank for mutual economic and social advice of these countries, suggested expanding the enrolment capacity of higher education through *the upgrading and the extension of relatively short study programmes* in institutions where there was no close link between teaching and research. Hence, diversification in higher education by types began to play a major role in many European countries.

The third stage was characterised by greater *cooperation, mobility* and the search for concerted *European dimensions* of higher education. This was initially put forward in the political "club" named European Union since the 1990s. The *ERASMUS programme*, inaugurated in 1987 to promote short-term student mobility within Europe, is the most prominent example of this stage.

In the fourth stage, the *individual European countries jointly* aimed *to pursue similar higher education policies and to strive for a system convergence*. In the Bologna Declaration of 1999, ministers in charge of higher education of almost 30 European countries expressed their intention to establish a common stage structure of study programmes and degrees. Subsequently, in the Lisbon Declaration in 2000, the European Council, i.e. the assembly of the heads of governments of the countries of the *European Union*, agreed to cooperate and take joint measures to invest in research and development and establish a "European Research Area" by 2010. Notably, public and private expenditures for research and development should be increased on average to three per cent of the Gross Domestic Product, thus helping to make Europe "the most competitive and dynamic knowledge-based economy of the world".

Obviously, the efforts to change higher education in Europe in the framework of the "Bologna Process" are by no means isolated. They could be seen as the most

ambitious activities to increase the common characteristics of national higher education systems in Europe.

In looking at the themes of the Bologna Process, we also note that they were not totally new at the time when the Bologna Declaration was signed. The views vary, however, among experts as regards the major *factors that triggered the decision* to advocate a convergent system of study programmes and degrees in Europe (see Witte, 2006). One can argue that three factors were frequently cited by experts exploring this issue. First, since the 1960s there have been debates in various European countries about the most desirable patterns of the higher education system and a need was felt to *make relatively short study programmes more attractive* in the wake of the expansion of higher education. Second, the ERASMUS programme inaugurated by the European Commission in 1987 was seen as such a "success story" that it stimulated debates on how *temporary student mobility within Europe* could be spread further. Thirdly, many politicians and other actors became concerned since about the mid-1990s that study in non-English-speaking European countries seemed to lose *attractiveness for students from other parts of the world*; the introduction of a Bachelor-Master structure of study programmes was considered to be a major vehicle to increase this attractiveness. These views spread rapidly, notably in France and Germany. In Germany, the Framework Act for Higher Education was already revised early in 1998 in order to facilitate the establishment of stages of study programmes and degrees, before joint declarations were signed across Europe.

It should be noted that *the basic assumptions that triggered the Bologna Process were not well founded statistically*. The number of students worldwide who were studying abroad and who opted for study in the non-English-speaking European countries was not really on the decline, as it was often claimed (see Teichler, 1999). Moreover, it is not certain whether measures of structural convergence are the most important to make higher education in Europe more attractive to students from other parts of the world: The language issue, the scarcity of highly organised doctoral programmes or the deficiencies regarding individual academic and administrative support for the students in some European countries could have been more salient factors. But, clearly, beliefs are also facts: The belief spread in Europe around the year 2000 that the structural similarities of the European higher education systems would make them more attractive for persons from outside Europe.

Also, a second assumption underlying the Bologna Process is questionable. The Bologna Declaration stressed that similar programmes and degrees in Europe would also serve intra-European student mobility. But temporary student mobility in Europe worked quite well beforehand in the framework of ERASMUS, and if problems of recognition did occur, they were seldom attributed to the structural variety of higher education across Europe. Intra-European student mobility could work better, if programmes and degrees were similar, but one could conclude that European countries would not have revamped the programmes and degrees in Europe, for a moderate increase in student mobility within Europe.

Reviewing the processes and results of the Bologna Process

The Bologna Process was accompanied by many *evaluation activities*:
- For the preparation of each ministerial follow-up conference, the individual countries were asked to write *progress reports*, and every time a working group synthesised these in an overall *"stocktaking" report*.
- The European University Association (EUA) or individual experts were commissioned regularly to undertake *"trend"surveys at higher education institutions* on the implementation of the Bologna Process (Haug & Tauch, 2001; Reichert & Tauch, 2003, 2005; Crosier, Purser & Smidt, 2007; Sursock & Smidt, 2010).
- On various occasions, *higher education researchers* were asked to assess the overall development of the Bologna Process (see Alesi, Bürger, Kehm & Teichler, 2005; Kehm, Huisman & Stensaker, 2009; Center for Higher Education Policy Studies, International Centre for Higher Education Research Kassel & ECOTEC, 2010).
- Several studies were commissioned on *specific themes*, such as statistics and developments of student mobility (Kelo, Teichler & Wächter, 2006; Center for Higher Education Policy Studies, International Centre for Higher Education Research Kassel & ECOTEC, 2008; Teichler, Wächter & Lungu, 2011), the opinions of academic staff (Gallup Organization, 2007) or student statistics and surveys in general (EUROSTAT & EUROSTUDENT, 2009).
- Moreover, various studies were commissioned *in individual countries* or undertaken by various agencies and scholars on their own initiative.

Yet, most actors and experts discussing the implementation and results of the Bologna Process come to the conclusion that *the information base achieved is deficient*. Available *statistics* are often not suited to measure Bologna-relevant phenomena. There are few valuable *surveys* that cover all the European countries. Information provided by actors is often highly politicised. Many reports focus on how far actors comply to the official *operational objectives* without any discussion of salient effects and possibly unintended effects (see Reichert, 2010). Many reports are characterised by *pre-mature expectation*s. They aim to measure and assess the results at a time when only the first steps of change are underway: For example, reports on the acceptance of the new Bachelors in the labour market were often undertaken and presented as valid findings before one tenth of the graduates had studied in the new degree system. Last but not least, the exciting and controversial reform climate created by the Bologna Process led to many *emotionally coloured reports* on its processes and impact.

A provisional account of the results of ten years of the Bologna Process

The analyses of the Bologna Process and the changes occurring in the process cannot be easily and comprehensively summarised. Yet, the author of this chapter claims that the following account covers the main messages of available analyses.

Speed of implementation: The operational objectives of the Bologna Process were implemented at very varying speed in the individual European countries. In some countries, the new degree structures and most of the accompanying measures were already introduced by 2002. In others, implementation started early but lasted many years. In other countries, the first years were characterised by debates on whether the new structures should be introduced, and it was only after a few years of discussion about the "if" of the reform that the "how" became the focus of the debate. In other countries, not much has happened after a decade since the Bologna Declaration (see Alesi et al., 2005; Sursock & Smidt, 2010).

The introduction of the Bachelor-Master structure: Surveys undertaken on behalf of the European University Association (see Sursock & Smidt, 2010) suggest that a Bachelor-Master structure of study programmes and degrees was implemented by 2010 in most higher education institutions in the Bologna countries. Accordingly, 53 per cent had implemented a cycle – Bachelor, Master and possibly doctor – structure in 2003. This share rose to 82 per cent in 2007 and to 95 per cent in 2010.

It can be added here that the "accompanying measures" to the structural change seem to have been carried out to a similar extent. 96 per cent of the higher education institutions responding in the EUA survey 2010 stated that they had a *credit accumulation system* for all Bachelor and Master programmes. Hence, 88 per cent make use of the ECTS system (60 credits as a normal nominal work load for one academic year). Also, the *Diploma Supplement* spreads quickly. According to the surveys named, 48 per cent of the higher education institutions in 2007 and 66 per cent in 2010 issued it to all graduating students and a further 14 per cent of institutions upon request.

The survey results are reported here, even though only 15 per cent of the higher education institutions had provided information. Certainly, institutions are more likely to respond to such a survey if they have implemented the changes addressed in the survey. Thus, the figures exaggerate the actual degree of implementation. Yet, most experts are convinced that the formal implementation of the Bologna mechanisms has progressed considerably.

Variation by field of study: However, the Bachelor-Master structure was not introduced to the same degree across all fields of study. As one might expect, it remained a minority phenomenon according to the EUA 2010 survey in most medical fields (veterinary medicine 16 per cent, dentistry 21 per cent, pharmacy 27 per cent, medicine 28 per cent, midwifery 36 per cent and nursing 46 per cent). But the introduction of the cycle-structure also remained incomplete in other fields, notably: architecture (46 per cent), law (61 per cent), teacher training (68 per cent) and engineering (73 per cent).

The Bachelor degree – a terminal or transitional degree: The Bachelor programmes at universities seem to function predominantly as an interim stage towards a Master degree. 85 per cent of the university representatives and 55 per cent of those from other higher education institutions responding to the 2010 EUA survey expect that most Bachelor graduates will not enter the labour market directly.

Length of study programmes: Although common goals and operational objectives were emphasised, the individual countries varied substantially in their interpretation of the goals and operational activities. Even the most obvious possible measure of European coordination within the new system of study programme, namely a standardisation of the length of the study programmes, has never been achieved. 18 countries consistently introduced 3-year Bachelor and 2-year Master programmes. Six have a 4+2 system, and four countries 4-year Bachelor programmes and Master programmes comprising one or 1½ years. The other countries have varied models (Eurydice, 2010).

Concurrent curricular reforms: Most higher education institutions responding to the 2010 EUA survey claim that curricular reconsiderations have taken place along structural changes. Among those introducing a Bachelor-Master structure, 77 per cent reported that this had been on the agenda in all departments.

Thematic range of the Bologna Process: As already pointed out, the thematic range of the Bologna Process widened substantially over time. As the Bologna Declaration was successful in triggering intensive discussions and efforts to change higher education, efforts were frequently made add issues to the Bologna agenda. Some observers consider this as steps towards a comprehensive reform of higher education in Europe, while others view this as a dilution of the reform programme.

In some countries, the introduction of the cycle system of study programmes and degrees was accompanied by intensive activities of *reconsideration and change of curricula*, while in others operational changes were implemented with few curricular considerations. In the course of the ministerial follow-up conferences, greater emphasis was placed on substantive matters of the new study programmes. This could be seen as an indication of disappointment that the initial aim to strive for structural convergence of the higher education system across Europe was a less powerful instrument for an overall reform than initially envisaged. In contrast, one could have assumed from the outset that a structural reform had to be accompanied by major curricular reforms. Most observers believe that the curricular debates on a stronger awareness of the results of study ("competences", "learning outcomes"), on feedback of experiences for the improvement of teaching and learning ("quality assurance"), on the levels of competences to be reached at the end of the various stages of study ("qualifications frameworks"), on the links between study and subsequent employment ("employability") and on the role of higher education programmes in the life course ("lifelong learning") indicate the need for improvements as well as successful changes (cf. Teichler, 2009c). But nobody dares to assess the extent to which changes in those directions have taken place. The aims of such reforms remain controversial. And it has remained an open question to know how far a paradigmatic shift towards a curricular convergence across Europe has taken place in recent years or how far the initial aim of preserving curricular variety amidst structural convergence has been upheld.

Involvement of actors: Many assessments of the Bologna Process point out that the *governmental actors* have been the strongest advocates of the key reforms from the outset. *Leaders of higher education institutions* followed quickly, while many *academics* continued to consider the Bologna programme as an undesirable impo-

sition from "above". And protests by *students* were not infrequent. There were widespread critiques that a university Bachelor was not a sufficient level of academically-based study, and many university teachers and students see the university Bachelor as a transition stage to the Master. The learning processes are often viewed as over-regulated in the short Bachelor programmes that are shaped by frequent examinations as a consequence of the implementation of a credit system. There are concerns that the strong drive towards "employability" undermines academic quality and students' critical and innovative reasoning.

General acceptance: As the debates about the strengths and weaknesses of the Bologna agenda are highly emotional and as we note many "eulogies and protests" (Reichert, 2010), it is very difficult to establish *how far the major reform trend is accepted or refuted.* In a survey of academic staff in 31 European countries conducted in 2007, about one third agreed to the statement "It would have been better if the old single-tier system (without a split in Bachelor and Master) was kept", while almost six out of ten disagreed (Gallup Organization, 2007). Disapproval of the Bachelor-Master system was most frequent on the part of academics in Germany (53 per cent), followed by those in Estonia (46 per cent), Hungary and Italy (42 per cent each).

Protracted process towards a European Higher Education Area: The Bologna Declaration of 1999 called for a "European Higher Education Area" by 2010. Actors and observers agree that major changes have taken place since 1999, but that a comprehensive reform has not taken place so far. The ministers of the European countries involved in the Bologna Process indicated in the their Communiqué of 2009 and 2010 that they saw another decade of the Bologna Process shaped by further steps of implementation of the initial goals, necessary revisions and efforts to reach even more ambitious goals.

Heterogeneous national approaches of "Bologna": Finally, it became clear that higher education in the various European countries, despite efforts for increased similarity and cooperation, has remained quite heterogeneous (cf. Eurydice, 2010). This is mirrored in the enormous differences, in the length of study programmes and curricular approaches. But it also affects the frequency of student mobility across Europe, as well as key issues of the relationships between higher education and the world of work touched upon in the Bologna reforms.

THE STRUCTURE OF STUDY PROGRAMMES AND DEGREES

"Convergence" and "comparability"

As already pointed out, the major operational objective of the 1999 Bologna Declaration was to encourage all countries to introduce a cycle system of study programmes and degrees. The aim was not to create a homogeneous structure. The term "harmonization" employed in the Sorbonne Declaration was replaced by the term *"convergence"* in the Bologna Process, but obviously a high degree of similarity was intended in order to achieve the aims of this structural reform.

The introduction of a convergent Bachelor-Master structure (the individual countries, of course, are free to name the degrees and titles as they like) was envisaged in order to reach a *"greater compatibility and comparability of the systems of higher education"*. This was expected to help to increase the recognition of study of students who were during their course of study and make the study programmes and degree more transparent for the students, graduates and employers,.

Length of study programmes

Prior to the Bologna Declaration, the *years of study* were viewed as the most important, though not only, criteria to compare study programmes and degrees. For example, reference to the years of study was a major point in facilitating student exchange and recognition in the framework of the ERASMUS programme. A high degree of "comparability" could be reached if the European countries agreed on a standard length of both Bachelor and Master programmes. This would imply a substantial change, for an analysis undertaken in the late 1980s had shown that the length of first study programmes in European universities had varied between three and six years and those, in other higher education institutions between one and four years, and among them those at least equivalent to a Bachelor between three and four years (Teichler, 1988).

Therefore, great efforts were made in the early stages of the Bologna Process to reach an agreement on the standard length of study. But these efforts failed. As already pointed out, the length of Bachelor programmes is 3-4 years, that of Master programmes 1-2 years and the overall length up to a Master degree 4-6 years. Hence the length of study is often formulated in terms of credits (60 ECTS credits equal one year of full-time study). However, the 3+2 structure became the most common. The 4+2 structure prevailed in the U.S. and the 3+1 structure in England and Wales. Yet, it is premature to assess whether the degree or the years of study are the dominant "exchange rate", if a comparison between programmes and degrees based on different lengths must be undertaken concerning mobility and employment. In any event, the lack of standard periods impedes "comparability".

Types of study programmes

A further issue as regards the extent of homogeneity or variety of the Bachelor structure is the *typology of the various Bachelor and Master programmes and degrees*. Different types of Bachelor programmes and degrees might exist de facto or de jure if there is not only a formal diversity of higher education programmes according to the study cycles, but also according to types of higher education institutions and study programmes already existing prior to the Bologna Declaration (for example in Austria, Germany and the Netherlands among the countries addressed in this comparative study). Also, a division of Bachelor programmes according to types may have been established in the Bologna Process (for example, the vocational Bachelor programme in French universities along the general Bachelor programme which corresponds to the traditional licence). Furthermore,

Bachelor programmes could be introduced in some countries in some tertiary education institutions that are not considered as higher education institutions (ISCED 5b), while in other countries these programmes are neither called Bachelor nor considered equivalent to Bachelor programmes.

Moreover, some countries opted for different types of Master programmes – varying, for example, according to whether they have an academic or professional emphasis, whether they are a sequel to a Bachelor in a certain discipline or can be a second cycle for Bachelor graduates from different disciplines, whether they cover the range of the respective discipline or are more highly specialised, whether they are studied, as a rule, immediately after the award of the Bachelor or whether a time span between the Bachelor award and the start of the Master programme is customary or even mandatory (in the case Master programmes for continuing professional training) (cf. Davies, 2009).

Opportunities of entry and transition

A further possible variation is worth noting. There may be differences within countries and between countries in the regulations and practices as regards *entry to Bachelor study* and the *transition from Bachelor to Master study*. For example, entry requirements to study programmes of different types or to study programmes in different types of higher education institutions may vary. And Bachelor graduates from different programme or institutional types may face more problems than others in being admitted to certain Master programmes. Even if there is no distinction as regards the Bachelor awards, Master programmes may vary between countries and within countries as regards entry conditions: They may offer open access for all Bachelor graduates, those from certain institutional types, those from their own institution or they may set restricted admissions for all students. The selection criteria and processes may be determined supra-institutionally, by the individual higher education institutions or by those responsible for the individual study programmes. Hence, the selection criteria and processes may be closely linked to prior study (e.g. according to grades obtained in Bachelor studies) or be based on specific selective admission systems.

There may also be a considerable diversity of Bachelor and Master programmes on the basis of *formal elements of diversity* in higher education. And many of the formal elements of diversity did not emerge in the Bologna Processes, but are carryovers from the previously existing formal diversity of higher education. Experts agree that the difference between types of institutions was the most salient element of formal diversity prior to the Bologna process in many European countries (cf. the overview in Teichler, 2007a, 2008), and this element did not become marginal when the Bologna reform aimed to make the cycle structure the single most important element of formal diversity in European higher education.

Transition from traditional to new structural types

In analysing the ten European countries addressed in the comparative study of this volume we note *five different types of structural changes or structural continuity of study programmes* possibly linked differently to types of higher education institutions:

- Substitution of a more or less unitary system (only universities, almost only long study programmes) by a two-cycle system within a single institutional type: Italy.
- Substitution of a two-institution type system with single-cycle study programmes (longer programmes at universities and shorter programmes at other higher education institutions) by a two-cycle system with Master programmes at both institutional types: Austria, Germany and Hungary and the Czech Republic, where first steps towards a two-cycle structure were already undertaken prior to the Bologna Declaration.
- Substitution of some models above (two-institution type system by single-cycle study programmes of different lengths) by a two-cycle (Bachelor-Master) system with Master programmes at one type of institution (the universities) and only Bachelor programmes at other higher education institutions: the Netherlands.
- Substitution of a system of long study programmes at universities in a broad range of fields and short study programmes at universities as well as in a limited number of fields by a two-cycle system in a broad range of fields: France, Norway and Poland. In the case of France, a new vocational Bachelor degree was established where most students move after the award of a two-year diploma programme to a third-year vocational Bachelor programme. In Norway, two types of short study programmes existed previously: programmes for select fields of study (notably humanities and natural sciences) at universities and study programmes in most fields provided by other higher education institutions.
- Continuation of a traditional two-cycle structure: United Kingdom.

As a consequence of both varied structures prior to the Bologna Declaration and varied approaches within the Bologna Process, we note a *variety of patterns of study programmes and degrees*:

- As regards (first-cycle) *Bachelor programmes*, a single type of Bachelor graduates seems to have emerged de jure or de facto in Italy, Poland and the United Kingdom. In contrast, two types of Bachelor graduates have been created de jure or de facto in Austria, the Czech Republic, France, Germany, Hungary, the Netherlands and Norway. Hence, the university Bachelor graduates are seen as a partly new or completely new type of graduates, while the other Bachelor graduates are seen as the successors of those from the previously existing short study programmes at other higher education institutions.
- As regards (second-cycle) *Master programmes*, the country reports on Austria and Germany present a divide by institutional type, even though more refined and cross-institutional types overlapping typologies of Master programmes exist in these countries.

– As regards *long single-cycle programmes*, we note that the two-cycle structure has not been established in all fields of study. There are single-cycle long study programmes in all countries in which the two-cycle structure was introduced as the dominant pattern in the framework of the Bologna Process. In some instances, traditional programmes persist which are expected to be phased out over time. But in all countries efforts often led to decisions to keep single-cycle programmes in selected fields, most frequently in medical fields, but also in some other fields, as pointed out above. Most country reports do not delineate traditional and new single-cycle programmes, and no clear distinction is made between the terms "traditional study programmes" and "single-cycle programmes".

Obviously, the transition from the formal diversity preceding the Bologna process to the new formal diversity, primarily based on cycles of study programmes, can be achieved more easily if (a) some short programmes had already existed previously and/or if (b) there is no clear divide between university Bachelor programmes and Bachelor programmes from other types of higher education institutions.

Informal diversity

The "comparability" of study programmes and degrees is not only challenged by elements of formal diversity in higher education, but also by *informal diversity*. Concurrently to the Bologna Process, greater attention is paid in the public to the informal vertical diversity, i.e. differences between individual higher education institutions as far as reputation and "quality" are concerned. *"Rankings"* of "world-class universities" (see the controversial debates in Sadlak & Liu, 2007; Usher & Savino, 2006; Marginson, 2008; Kehm & Stensaker, 2009; Shin, Toutkoushian & Teichler, 2011) became extremely popular and are believed by experts to reinforce an even more steeply stratified system. In contrast, *informal "horizontal" diversity* in terms of specific "profiles" of the individual higher education institutions is advocated here and there, but does not gain the same momentum or is even undermined by the trend towards imitation of the thrust of the top universities. This competition for informal vertical ranks seems to counteract the vision of the Bologna Process according to which student mobility is facilitated between large numbers of institutions and according to which formal degree levels are viewed as important for "comparability". In response to "ranking" pressures to increase vertical diversity, the European Commission supports a project aimed at establishing a multi-dimensional "classification" of higher education institutions (van Vught, Kaiser, Bohmert, File & van der Wende, 2008). But this project is also driven by the view that maximal diversification is desirable and that multi-dimensional rankings should be pursued and, thus, does not match the vision of the Bologna Process of facilitating mobility and increasing comparability through new formal degree structures – a vision which requires that many institutions mutually trust each other as far as the similarity of the quality level is concerned.

Bachelor graduates: Transition to the world of work or further study?

The introduction of the Bachelor-Master structure is also expected to make the Bachelor programmes more attractive as a basis for subsequent employment. This will require efforts on the part of the universities to organise curricula in such a way that they cannot be understood as merely the first stage of a Master programme and acceptance on the part of the students and employers for whom short study programmes at universities are a new phenomenon. Therefore, the Bologna Declaration stated that: "The degree awarded after the first cycle shall also be relevant to the European labour market".

Formal vertical diversification in various European countries has been pursued since the 1960s by establishing – alongside universities – other higher education institutions with a vocational emphasis, concentrating on the teaching function and relatively short study programmes. It is taken for granted that a large number of graduates from the other higher education institutions would be employed in associate professional positions, while most university graduates would be employed in managerial and professional positions. This was viewed as normal in the wake of higher education expansion, even though the successful careers of some graduates from other higher education institutions in a professional and managerial position were viewed as helping to stabilise the reputation of these institutions and their study programmes.

As the Bologna Process aims to make the Bachelor-Master structure the most important dimension of formal vertical diversity, one could expect that the Bachelor-Master distinction would play a similar role in the labour market as the other higher education institutions-universities distinction had played: Most Bachelor graduates could be expected to be employed in associate professional positions, whilst most Master graduates would be absorbed in professional and managerial positions. Similarly, one can expect that Master graduates will have a somewhat higher average income than Bachelor graduates from the same field of study who are employed after the award of the Bachelor degree.

Conclusions for the analysis of graduate surveys

An account of the structural-quantitative changes occurring in the Bologna Process makes clear that the introduction of a convergent system of study programmes and degrees across Europe as such does not automatically create a "greater compatibility and comparability of the systems of higher education". Many specifications, such as the length of the study programmes, the possible creation of different types of Bachelor and Master programmes, and regulations and practices as regards entry to Bachelor programmes and progression from Bachelor to Master programmes are handled differently in the European countries. Graduate surveys – as they are designed – cannot reveal the diversity in those respects, but they can show how far professional success varies between Bachelor graduates from universities and Bachelor graduates from other higher education institutions.

Moreover, one must point out that the promotion of a cycle structure of study programmes and degrees can only be viewed as successful if a sizeable proportion of Bachelor graduates opt for employment after the award of the degree. Graduate surveys are the most suitable tool to measure rates of Bachelor graduates embarking on employment and those who continue their studies. They can serve this purpose if they do not exclude Bachelor graduates who continue study, and they can serve this purpose even better if they are undertaken not too soon after graduation.

Finally, graduate surveys can help to assess the functioning of the cycle structure of study programmes and degrees by measuring how close or how different the "professional value" of the Bachelor degree is compared to that of the Master degree. This will be the major theme of the subsequent chapters.

Here also the question is asked: How many Bachelor graduates continue their studies? But either this share cannot be compared with respective shares of other Bachelor graduates because such a comparison group does not exist, or the difference between the professional success of university Bachelor graduates and other Bachelor graduates is likely to be smaller because there was a tradition of transfer to employment on the part of university short-programme graduates prior to the Bologna Process. Therefore, more or at least the same degree of attention is paid to the second question: How far does the professional success of university Bachelor graduates differ from that of Master graduates?

THE BOLOGNA PROCESS AND STUDENT MOBILITY

The initial objectives

The Bologna Declaration of 1999 set the enhancement of student mobility as the major strategic objective of the reform. From the outset, the key operational objective was to establish a cycle structure of study programmes and degrees, and the increase of student mobility was the single most important strategic objective. Other strategic objectives gained momentum in the Bologna Process over time, but increasing mobility remained an undisputed priority.

As already pointed out, two aspects of mobility were emphasised at the beginning: The structural reform and the accompanying measures should help (a) to increase the attractiveness of higher education in Europe for students from other parts of the world, and (b) to facilitate intra-European mobility.

Categories of mobility

The region of origin or destination (or specifically the country of origin and destination) of student mobility already addressed at the outset of the Bologna Process is only one of the relevant categories in the analysis of mobility in Europe. The following other categories are also employed frequently in policy discourses as well as in analytical studies, as a methodological study on the quantitative measurement of student mobility has pointed out (Kelo, Teichler & Wächter, 2006):

Many actors and experts refer to the *nationality* (or "citizenship") of the students and its relation to the country of study. In contrast, other analyses measure *genuine mobility*, i.e. border-crossing for the purpose of study.

All analyses make a distinction between the directions of mobility. If citizenship is referred to, a distinction is made between "foreign students" and "study abroad", and if mobility is addressed, the respective terms are *"inward mobile students"* and *"outbound mobile students"*.

As a rule, mobile students are foreigners; in contrast, many foreign students have lived and learned in the host country prior to study: they are foreign but not mobile for the purpose of study. As a consequence, figures of foreign students are higher as a rule than those of mobile students. However, not all students are foreigners, but persons may have lived and learned abroad prior to study and opt to study in the country of the nationality. Therefore, a distinction can be made between *"foreign mobile students"* and *"home country mobile students"*.

Some students go to another country in order to study and are awarded a degree or any other certificate or diploma that testify the successful completion of the study programme in that country. Other students go to another country for a period of study, often for a semester or an academic year. In the methodological study quoted above, a distinction is made between *"diploma mobility" and "credit mobility"*. Terms such as "degree mobility" and "temporary mobility", "short-term mobility", etc. are also employed.

A short-term *sojourn may serve different activities*. Students may study regularly or make short visits, take language courses, participate in an internship or work abroad, where the work may be linked to the field of study and the prospective vocational area. Activities other than study are not addressed, as a rule, in educational statistics (unless students doing other activities are regularly enrolled), but some surveys make distinctions between various activities: in the latter case, these may be described as either "study" or "(other) study-related activities"; some surveys use various categories of study-related activities.

A further distinction is sometimes made between mobility that is funded or arranged by the institution on the one hand and mobility outside such institutional frameworks on the other, i.e. choice of the partner institution outside institutional exchange arrangements and funding by other means than support schemes for student mobility. Terms such as *"programme mobility" and "exchange students"* are used on the one hand and *"individual mobility" and "free movers"* on the other. Hence, these terms are not used consistently: "Free movers", for example, in some texts are understood as students who are mobile outside support programmes and in others as students who spend the period abroad at a higher education institution which is not linked to the home institution through any partnership arrangement.

Finally, the methodological study above underscores the difference between *"vertical" and "horizontal" student mobility*. Students of the former type move to a higher education institution with greater academic quality than at the home institution or t home country, whence the higher academic quality in the host country is often combined with a more favourable economic situation. In contrast, the latter students go to a country and institution where the academic quality is similar to

that at home. Such a distinction cannot be made consistently on the basis of available statistics and is often as informal distinction, but it is very important, as far as the students' motives for mobility, their conditions of learning in another country and the typical outcome of study in another country are concerned. Vertically mobile students expect a major quality leap forward, and for that purpose they have adapted to the conditions at the host institution; they are more likely to study for the whole programme abroad, and they have a great need of academic support on the part of the host institution. Horizontally mobile students are more likely to learn from contrasts of profile rather from a higher level or quality in the host country; many are temporarily mobile and need less academic and administrative support than vertically mobile students.

In the early years of the Bologna Process, the discourse about student mobility often remained vague concerning the terms employed and the underlying concept. Also, no strong need was felt to set common priorities for student mobility along those categories. For example, many actors and experts quoted available statistics of foreign students and study abroad as if they were not aware of the difference between foreign nationality and mobility for the purpose of study abroad, while others accepted statistics on foreign students as the best available "proxies" for student mobility.

Lack of statistical data on student mobility

International educational statistics are jointly collected and compiled by UNESCO, OECD and EUROSTAT[1] (*UOE*) which are delivered to them by the respective national statistical agencies. Until recently, the UOE statistics informed solely on foreign students and study abroad (if some countries collected data on genuine mobility, these were presented in statistics on foreign students and study abroad without any respective explanation). In the light of the information needs of the Bologna process, we observe further weaknesses of the available international statistics:

– Many countries include temporarily mobile students – the most frequent mode of intra-European student mobility – only partially or not at all in their student statistics. Some countries even count temporarily outbound mobile students as home students during the study period abroad.
– The available international statistics do not make any distinction between "degree-mobile" or "diploma-mobile" students, i.e. those intending to study a whole study programme abroad, and "temporarily mobile", "short-term mobile" or "credit-mobile" students, i.e. those intending to study abroad for one semester or a somewhat longer period within a study programme.
– There is no distinction in the international statistics according to citizenship or mobility according to Bachelor and Master programmes.

[1] The statistical agency of the European Union.

– The statistics present student numbers in a given year (in most cases an academic year). Thus, they are not suitable to establish how many students have studied in another country during their course of study – either for the whole programme or for some period during the course of study.

The gradual move towards genuine mobility data

The methodological study on student mobility data pointed out that nine European countries had statistical data on genuine student mobility – most of them in addition to nationality data, but some instead of nationality data. Students were counted as mobile if the country of prior education was different from the country of study or if the country of residence was different from the country of study (Kelo, Teichler & Wächter, 2006). Therefore, it was possible to show how statistics of foreign students differed from statistics of inward mobile students for some countries. This can be illustrated for Austria – the only country of the ten countries addressed in this comparative for which detailed data were available both for 2002/03 and for 2006/07 (see Teichler, Wächter & Lungu, 2011). In 2002/03, 11 per cent of all higher education students in Austria were foreign mobile students and 1 per cent were home country mobile students, thus adding up to 12 per cent all mobile students, while 3 per cent were foreign non-mobile students and thus 13 per cent of foreign students. From 2002/03 to 2006/07, the proportion of foreign mobile students – the most important of the available statistical data for the Bologna Process – increased from 11 per cent to 12 per cent.

The methodological study triggered efforts on the part of various European countries to also collect data on genuine student mobility; in the meantime, most European countries collected data on both foreign and mobile students. However, the number of countries that collects data on mobility is still too limited to calculate outbound mobility with the help of data on inward mobility. Moreover, the international data collectors recommend that national agencies exclude short-term mobile students; many countries follow this recommendation, while others include foreign and possible foreign mobile students for a short period.

Hence, data are now available now on foreign students and students studying abroad which most likely include all diploma-mobile and possibly half the short-term mobile students. Clear distinctions can neither be made between diploma-mobile and short-term mobile nor between Bachelor and Master students: Data are available on foreign inward mobile students in a selected number of European countries without a corresponding calculation of foreign outbound mobile students. No international statistical data set at all on short-term mobile students.

Three other data sources for student mobility can be taken into consideration and are used in some instances:

– *Administrative data*: Agencies promoting student mobility set up their own administrative data. Obviously, the data collection of student mobility in the framework of the ERASMUS programme is the largest of its kind. In the absence of statistical data on temporary student mobility, ERASMUS data are taken in some analyses as a proxy for temporary student mobility in Europe (e.g.

EUROSTAT & EUROSTUDENT, 2009), though one does not know whether ERASMUS mobility comprises half, a third or even less of temporary student mobility in Europe.

– *Student surveys:* A student survey called EUROSTUDENT, periodically undertaken in various European countries, provides information about the proportion of students having been temporarily abroad prior to the time of survey (see Orr, 2008). This survey is bound to undercount temporary mobility, because the students surveyed may study abroad temporarily in the remaining period of study.
– *Graduate surveys:* The two major European comparative graduate surveys undertaken hitherto (graduation cohorts 1994/95 and 1999/2000) asked the graduates to provide information on mobility prior to study, during the course of study and in the early years after graduation (cf. Schomburg & Teichler, 2008).

In the meantime, various national governments, the ministers cooperating in the Bologna Process and the European Commission have moved towards declaring targets of mobility. The authors of a second methodological study on student mobility data, in analysing respective policy documents, came to the conclusion that measures of two modes of mobility are now most indicative of the prevailing mobility policies (see Wächter, 2011):

– the current share of inward mobile students from other parts of the world to European countries, and
– the outbound mobility among European students, i.e. the quota of European students who had studied in another country (in or outside Europe, short-term or all the study period, once or more frequently) during the course of their studies.

As regards the latter, the ministers in charge of higher education stated in the Leuven Communiqué in 2009 that a quota of outbound mobility (for study and practical periods) of 20 per cent should be reached by 2020. They did not provide any further definition of the quota.

Trends in study abroad and mobility

For the development in first decade of the Bologna Process, only data on foreign students from countries outside Europe can be referred to because most European countries have not collected genuine mobility data for the whole period. A recent statistical analysis (Teichler, Wächter & Lungu, 2011) shows that the number of foreign students from outside Europe (and unknown nationality), who were enrolled in tertiary education institutions in the 32 European countries addressed in this study (ERASMUS-eligible countries and Switzerland), almost doubled from slightly more than 400,000 in 1999 to about 800,000 in 2007. The rate among all students in these countries grew from 2 to 4 per cent during this period. The increase in foreign students from outside Europe in Europe was also clearly higher than the growth of worldwide study abroad; while the former figure doubled, the latter increased by about 50 per cent (see United Nations Educational, Scientific and Cultural Organization: Institute for Statistics, 2009). This finding suggests that higher education in European countries has become more attractive for students from other parts of the world in the course of the Bologna Process. And the fact,

reported by various European countries that foreign students from other part of the world make up a relatively high proportion of Master students indicates that the Bologna reform of establishing a cycle structure of study programmes and degrees made study in European countries more attractive where a single-cycle structure had existed previously.

It could be added here that the respective proportion of foreign student is smaller if all the signatory countries of the Bologna Process are taken into consideration (see CHEPS, INCHER Kassel & ECOTEC, 2010). This is primarily due to the inclusion of Russia – characterised by a large absolute number of students and a low percentage of foreign students. But these data also confirm an increase in the share of foreign students.

According to the statistics for the 32 European countries, the number of foreign students who are citizens of other European countries increased from 3 per cent in 1999 to 3.3 per cent in 2007. According to the same source, however, the available statistics of students studying abroad from these 32 countries slightly declined from 3.3 per cent in 1999 to 2.8 per cent in 2007 in Western Europe. The respective figures for the 10 countries addressed in this comparative study are presented in table 1: We note an increase of student mobility in five of ten countries.

Table 1. Ratio of Students with Home Nationality Enrolled Abroad to Resident Students with Home Nationality (per cent)

Country	Ratio			Change*	
	1998/99	2002/03	2006/07	of ratio	of absolute numbers
AT Austria	5.1	6.4	6.0	+18	+14
CZ Czech Republic	1.7	2.5	2.5	+47	+119
DE Germany	•	3.1	4.3	(+39)**	(+69)
FR France	2.4	2.8	3.2	+33	+38
HU Hungary	2.4	2.2	2.1	-13	+34
IT Italy	2.4	2.3	2.3	-4	+4
NL The Netherlands	2.8	2.5	2.6	-7	+13
NO Norway	7.1	7.7	6.8	-4	+7
PL Poland	1.1	1.3	2.0	+82	+169
UK United Kingdom	1.4	1.4	1.2	-14	-10

* Increase/decrease from 1998/99 to 2006/07
** Change 2002/03-2006/07

Source: Based on Teichler, Wächter and Lungu (2011)

As these figures comprise only some short-term mobile students, we can estimate that about 2 per cent of the students from the 32 European countries who are mobile within Europe study in the other country for the whole study period and that this rate has not changed substantially in recent years. Table 1, however, suggests that this share varies dramatically between the ten countries addressed in this com-

parative study: in 2006/07 just little over one per cent of British students to almost 7 per cent of Norwegian students.

Despite the weaknesses of the available data, we can infer that of the two strategic aims of the Bologna Declaration as regards student mobility, one was successful: Students from other parts of the world came to Europe in larger numbers than one could have expected from trends in worldwide mobility increase. The other was not successful: Student mobility within Europe seems to have increased at a slow pace – slower than in the 1990s during the first decade of the 21st century.

Future measures of mobility

In considering the past weaknesses and the steps underway for improvement, we can expect that the number of students from outside Europe studying at a certain moment in time in European countries will continue to be provided through official national statistics and compiled by UNESCO, OECD and EUROSTAT. Therefore, data on foreign students and study abroad will be increasingly supplemented by data on foreign mobile students.

Second, we can expect that the fact of having studied in another country during the course of study will be measured with the help of two sources. Educational statistics compiled by UNESCO, OECD and EUROSTAT will show what proportion of students from the various European countries study for a degree in another country. And graduate surveys will be referred to as the most suitable instrument of measuring the – share of outbound mobile students.

THE BOLOGNA PROCESS AND "EMPLOYABILITY"

The role of the link between study and employment in the Bologna Process

As already pointed out, the relationships between study and subsequent employment have emerged in the Bologna Process as a second major strategic objective. The debates and statements on that theme, however, have not led to clear targets and measurable results in the same way as those on mobility.

The Bologna Declaration of ministers from 29 countries in 1999 does not comprise any recommendation to strengthen the employment orientation of higher education. Their quote for a labour "relevance" of "the degree awarded after the first cycle" was not a call for a stronger professional emphasis of study programmes in general, but rather for some degree of professional emphasis across all levels of study programmes.

Except for the issue above, nothing is said about possible curricular implications, and no call is made for curricular convergence. Also, the accompanying measures of spreading the practice of handing out an internationally readable "Diploma Supplement" to all students upon graduation is not based on the aim to change curricula, but rather to document the existing curricula and the individual study achievements.

However, the term "Bologna Process" is not used just to observe the implementation of the Bologna Declaration of 1999, but to describe a continuous process of policy formulation, implementation, stock-taking of results, and policy reformulation. As a rule, the communiqués published at the end of the follow-up conferences of the ministers are viewed as officially documenting such policy reformulations. And the communiqués of the theme-specific conferences of actors and experts organised by the Bologna Follow-up Group (BFUG), such as the first conference on employability held in Swansea in 2006[2], are viewed as quasi-official specifications of the Bologna policies. Hence, we can say that the process of policy reformulation is not limited to experienced-led modification of the thrusts of the Bologna Declaration, but that the changing policy formulation reflects the changing Zeitgeist of higher education in general as well as possible interests of actors involved to increase the political relevance of their objectives through incorporation in the above named communiqués.

While a structural approach dominated at the beginning, *the Bologna Process gradually moved towards curricular matters*. The terms "quality assurance", "employability" and "qualifications frameworks" signal this shift of emphasis. Certainly, this shift was to some extent determined by the logic of the initial structural approach. Structural convergence in terms of a cycle system of study programmes and degrees *necessarily calls for some curricular reflections and measures:*

– the issue of curricular relevance of a university Bachelor,
– the issue of distinct levels of competences typical for a Bachelor and for a Master, and
– the issues of "international education" and the "European dimension" of higher education which became more relevant due to increasing mobility.

The second issue plays a stronger role in the Bologna Process. A need was felt to disentangle the level of competences and knowledge strived for up to a Bachelor and to a Master degree. The national ministers approved the formulation of *"qualifications frameworks"* in their communiqué of 2005 which could be formulated for Europe as a whole or within national settings and disciplinary settings. For example, Bachelor graduates should be able to "apply their knowledge/understanding in a manner that indicates a professional approach", while Master graduates should be able to "apply their knowledge/understanding and problem solving abilities in new and unfamiliar environments within broader contexts".

Undoubtedly, however, the subsequent debates and policy statements were not merely driven by the necessary specification of the structural reform envisaged in the Bologna Declaration. Rather, the scope of these debates widened and developed their own dynamic. The Bologna Process is so open and controversially interpreted that nobody can claim to know for sure what are its "employability" objectives and targets. The author of this article, however, had argued that the "employability" thrust in the Bologna Process can be characterised by four aspects (see Teichler, 2009a, 2009c): (a) a discussion centred around a misleading term, (b) a

[2] For further information see http://www.bolognaconference.swansea.ac.uk/ (retrieved January 25, 2011)

growing "output and outcome awareness" in higher education, (c) a growing emphasis on abilities not straightforwardly enhanced in the acquisition of academic knowledge, e.g. general competences and practice-oriented learning, and (d) a growing pressure on higher education to strengthen the utility of study for the subsequent work of graduates. This will be explained briefly.

The term "employability"

The term "employability" is frequently used when the relationships between study and subsequent employment are addressed. The term as such is misleading in two respects:

– First, "employability" is a well established term of labour market research and policy addressing problems of *"youth at risk"*, notably problems of finding employment. In contrast, "employability" in the context of the Bologna Process addresses the question of how a very privileged group on the labour market might enhance its career prospects even further.
– Second, the term "employment" refers to the "exchange dimension" of the world of work, i.e. to salaries, positions, envisaged duration of employment in the contract, holidays, and social benefits linked to employment. In contrast, the respective debates in the Bologna Process focus on the quality and relevance of curricula for subsequent work assignments.

In looking at the debates on the "employability" of higher education graduates, we note that a broad range of goals is advocated, for example: The higher education institutions should do what they can to enhance the professional success of their graduates; students should strive to enhance the exchange value of their studies, i.e. choosing the university which promises the highest credential value, choosing a subject leading to well-paid occupations, etc.; a closer link should be established between the substance of study programmes and of work tasks; more emphasis should be placed on learning to transfer academic knowledge to action in the world of work, e.g. an applied emphasis, fostering problem-solving abilities; more should be undertaken to enhance competences which are not closely linked to the academic subject matter, but are highly appreciated in the employment system (e.g. socio-communicative skills); higher education institutions should assist their students and graduates in the job search process (information and advice as regards occupational choice, help to get in touch with employers, coaching for employment interviews, etc.).

Many actors and experts involved in the Bologna Process believe that the term "employability" has a normative undercurrent of subordinating study to the prevailing demands of the world of work; this is the cause of highly controversial debates. The author of this article is convinced that the thrust of this debate would be expressed in a better way if the term "professional relevance" was used: Higher education institutions are challenged to take into consideration when shaping their curricula what learning and enhancement of competences will mean for subsequent work. This holds true, irrespective of whether fields of study are traditionally closely linked to certain occupational areas or not, whether a more theoretical or a

more applied curricular emphasis is preferred and whether one wants to adapt students to the prevailing job requirements or strengthen their potentials of being agents of change.

Output and outcome awareness

The Bologna Declaration does not call for "employability". However, the "outcome awareness", which has been growing for about two decades in Europe, is likely to affect debates on the changing educational function taking place in the Bologna Process.

Since the 1980s, various activities have spread in Europe to evaluate teaching and learning, research and administration of higher education (see the overview in Cavalli, 2007). *Evaluation* – undertaken in various institutional settings such as accreditation or in the achievement-oriented remuneration of academics, competitive research funding, output indicator-based institutional funding, etc. – is understood as activities of periodic, systematic and comprehensive analyses and assessments of the aims, processes and results of the core activities of higher education. In a mixture of mechanisms that both stimulate the reflection and control the action of key actors in the higher education system, these key actors are expected to concentrate their attention not only on their major activities, but also on a meta-level of observation and assessment: Why and how are activities undertaken? What results are envisaged and achieved? The basic underlying assumption of the many evaluation activities is that the key actors must constantly reflect on the rationales, processes and effects of their activities in order to achieve improvement and that they are able to find appropriate means for improvement.

It has recently become more popular to ask those responsible for study programmes and examinations at higher education institutions not to consider teaching, learning and examination in terms of knowledge, knowledge transmission and knowledge acquisition, but rather in terms of abilities that have been shaped by higher education and could be useful to cope with work and other life tasks after graduation. *"Learning outcome"* is a general term that is used in this context, and *"competences"* refer to potentially useful abilities which have been shaped, but not exclusively, by higher education. This is reflected in various communiqués of the ministers in charge of the Bologna Process, notably in recommendations concerning the establishment of "qualifications frameworks".

Beyond acquisition of knowledge: general competences and practice-oriented learning

There is no comprehensive analysis of the major curricular thrusts which have emerged in the process of curricular reforms that accompany the introduction of a convergent cycle system of study programmes and degrees in the various European countries. Most available documents suggest that two curricular thrusts that are linked to the frequently used term "competences" (see the overviews of concepts in Bennet, Dunne & Carrée, 2000; Knight & Yorke, 2002, 2003) have gained mo-

mentum. Both have in common that *competences are not merely viewed as based on knowledge and cognition*, but are also affective-motivational and to a certain extent sensu-motorical dimensions, and second, that these competences must be enhanced by a *broader range of measures than just classroom instruction and related learning*.

The first thrust aims to enhance competences that are not related to specific subject matters. Terms such as *"generic skills" and "key skills"* are used to characterise these competences (see Villa Sànchez & Poblete Ruiz, 2008). Some actors and experts believe that these can be enhanced in the courses that are closely linked to specific subjects, whilst others advocate the introduction and extension of non-subject related courses, e.g. foreign languages, rhetoric, logic of science, paper writing, etc.

The second thrust, often called *practice-oriented learning*, aims to strengthen the links between academic learning and the anticipation of future professional tasks. Frequent approaches are internships, project-based learning, involvement of practitioners as part-time teachers, etc.

Long lists of competences are often put forward to underscore the broad mandate of higher education institutions to enhance competences. The classifications vary, but the overall range of themes addressed is quite similar. As an example, the author of this paper presents a classification he has suggested (Teichler, 2009a): (a) *general cognitive competences*, i.e. emphasis on generic skills and broad knowledge, on theories and methods instead of knowledge areas, learning to learn, etc., (b) w*orking styles*, e.g. working under time constraints and perseverance, (c) g*eneral occupationally-linked values*, e.g. loyalty, curiosity and achievement orientation, (d) *specific professionally related values*, e.g. entrepreneurial spirit, service orientation, (e) *transfer competences*, e.g. problem-solving ability, (f) *socio-communicative skills*, e.g. leadership, team work, rhetoric, (g) *supplementary knowledge areas*, e.g. foreign languages, ICT, (h) *ability to organise one's own life*, (i) *ability to handle the labour market*, e.g. job search relevant knowledge, promising self-presentation to employers, and (k) *international competences*; e.g. knowledge and understanding of foreign cultures, comparative analysis, coping with unknown persons.

One must admit, though, that the debate about competences to be enhanced by higher education is often fuzzy, because the various themes addressed tend to be defined according to three dimensions. First, some areas of competences are defined according to the *knowledge* dimension, e.g. knowing and understanding theories, methods and knowledge of academic disciplines (e.g. mathematics); in that case, it is clear what should be enhanced, but it is not really clear what it means for the competence of the persons and successful utilisation. Second, other competences are defined according to the *personal ability* dimension, e.g. "wise" or "smart"; in this case, how this competence could be fostered and translated into professional action remains vague. Third, some competences are defined according the *functional dimension*, i.e. the ability to achieve something on the job or in other life spheres, for example the "problem-solving ability"; in that case, the use of competences is clear, but how such competences are enhanced in higher education remains a "black box".

Strengthening the utility of study?

Learning in higher education can be described as both academic and professional. In some fields, an academic approach may prevail, whilst in others a professional approach may prevail. In universities, understanding academic knowledge tends to be viewed as more important than in other higher education institutions which may have an "applied" emphasis.

Leaving aside nuances, we find a *far-reaching consensus* in economically advanced countries about the *key educational functions of higher education*. Higher education is expected to:

– teach students to understand and Master academic theories, methods and knowledge domains,
– contribute to cultural enhancement and personality development,
– prepare students for subsequent work and other life spheres through relevant knowledge and help them to understand and acquire the typical "rules and tools" needed in their professional life,
– foster the ability to challenge prevailing practices. Graduates must be sceptical and critical, be able to cope with indeterminate work tasks and be able to contribute to innovation.

In the Bologna Process, a controversial debate developed about the functions of higher education. The discourse on "knowledge society" and "knowledge economy" underscores that higher education is becoming increasingly more important for technology, economy, society and culture and that, as a consequence, it is increasingly under pressure to provide evidence that it is useful for society. Extreme voices are frequently heard. On the one hand, we hear that higher education should have a close "match" to the current visible "demands" formulated by employers or inferred from the trends on the labour market. On the other, there are arguments that the Bologna Process in its emphasis on "employability" and the "professional relevance of Bachelor programmes" is an instrument of destruction of the traditional values of higher education, according to which a certain distance between knowledge and its use and certain discrepancies between job requirements and the enhancement of competences through higher education are creative for the knowledge system and for the world of work.

Obviously, the term "employability", as it is used in the Bologna Process, creates the impression that higher education should subordinate itself to the currently presumed "demands" of the employment system. The author of this article, in contrast, has argued that it would be preferable to use the term "professional relevance" because it suggests that in the "knowledge society", higher education is bound to reflect on the outcomes of its activities for the world of work and draw conclusions from that. But this reflection leaves open a broad range of options whereby the subordination to the presumed labour market needs may not be the most creative way for higher education to serve society (see Teichler, 2009a).

As a consequence of this controversial debate, one could assume that graduate surveys would serve the Bologna Process best if they measured "professional success" according to broad range of objectives which play a role in the public debates

and according to the graduates' values and intentions. Graduate surveys must take care that their design does not only shed light on a limited range of views on how the relationships between higher education and subsequent employment should be shaped.

THE POTENTIALS OF GRADUATE SURVEYS IN THE FRAMEWORK OF THE BOLOGNA PROCESS

Potentials for the analysis of mobility

The comparative study presented in this volume is based on the conviction that graduate surveys can be a valuable tool for assessing the processes and results of the Bologna reform (cf. the approaches of comparative graduates surveys demonstrated in Teichler, 2006; Schomburg, 2007; Mora, 2008). This – according to the authors of this volume – holds true for both major strategic objectives: to increase student mobility and to enhance the "employability of graduates".

As regards mobility, graduate surveys are the best tool to measure the *frequency of mobility*, i.e. how many students have spent a period in another country during the course of their studies for the purpose of study or for various study-related activities. Graduate surveys have this potential because they can collect information retrospectively on activities in the course of study up to graduation. Therefore, respective information is provided in the subsequent chapters.

We should bear in mind, though, that national and internationally comparative graduate surveys are only suitable to measure short-term mobility. Information on the much smaller number of students from the respective country or countries who have spent the whole study period up to a degree in another country can be measured with the help of international education statistics which also comprise data on the number of graduates.

Graduate surveys are also potentially suitable instruments to provide an overview of the frequency of *other study-related activities* undertaken during the course of study, e.g. internships, employment related to the field of study or the prospective future professional area, summer schools, language courses, etc. Both the gathering of information on study and on other study-related activities with the help of student or graduate questionnaire surveys, however, only works if the categories of responses provided in the questionnaires are clearly formulated. For example, the graduates surveyed in the comparative REFLEX-study had responded affirmatively to the question of whether they had studied abroad so frequently that we can infer by taking into account various other sources that they included brief visits, summer schools, languages courses, etc. (see the report of the responses in Schomburg & Teichler, 2008). Obviously, a distinction must be made in the questionnaire between study for at least a term or semester on the one hand and short study and various other study-related activities on the other.

In this comparative study, information on study abroad during the course of studies is presented only for the most recent graduates. A *time series study* could be

undertaken if graduate surveys were undertaken periodically and if the same or similar questions were asked.

Graduate surveys also provide the opportunity of analysing border-crossing *mobility during the first years after graduation.* In this comparative study, the authors of country chapters also report about employment after graduation. The analysis is more refined in some country studies and can be more refined in future comparative analysis if a clear distinction is made between international activities between graduation and the time of the survey on the one hand and international activities at the time of the survey on the other. Moreover, one could address mobility in the framework of further study as well as professional mobility in terms of being sent abroad by the home country employer.

Finally, graduate surveys can contribute to the analysis of factors triggering student mobility and the impact of mobility in the course of study on subsequent employment. This type of analysis has been undertaken in the past in surveys that focus on the employment of mobile graduates (see Janson, Schomburg & Teichler, 2009). General graduate surveys provide the opportunity to measure the impact of student mobility in a more sophisticated way by comparing employment between formerly mobile and formerly non-mobile students (ibid.; see also Jahr & Teichler, 2007).

Potentials for the analysis of the functioning of the cycle structure

As regards the functioning of the cycle-structure of study programmes and degrees, graduate surveys can provide information about Bachelor graduates' whereabouts some time after graduation. It is a crucial for the Bologna Process that actors and experts know how many Bachelor graduates continue their studies, both study and work, are employed, are unemployed or undertake other activities. Graduate surveys cannot only provide this information, but they can also specify the profile of graduates who opt for employment compared to that of graduates who opt for further study (for example the type of higher education institution, the field of study, the socio-biographic background of study achievement in the framework of the Bachelor programme). Again, periodic surveys could help to establish a time-series of the whereabouts of graduates.

We must bear in mind, though, that graduate surveys undertaken shortly after graduation can only present an incomplete picture of the number of persons who pursue their professional career with a Bachelor or a Master degree, because some Bachelor graduates may be employed initially and begin Master studies some years later. But starting Master studies does not guarantee successful completion; hence, some of those who opt for it may eventually settle with a career at Bachelor level.

Data on the whereabouts of Bachelor graduates are crucial for the assessment of the functioning of the cycle structure of study programmes and degrees. However, the interpretation of the facts may vary dramatically: Some actors and experts are convinced that this new structure is reasonably implemented if a minority of Bachelor graduates transfers to Master programmes, whilst others consider the transition of the majority to employment as normal. Some consider the cycle structure as a success if professional careers of Bachelor graduates are very similar to those of

Master graduates, whilst others consider a certain gap of professional rewards between the two levels as normal within an educational meritocracy.

Potentials for the analysis of "employability"

As regards "employability", graduate surveys have a much wider range of options to analyse graduate employment and the relationships between study and subsequent employment.

First, graduate surveys can describe the early career of Bachelor graduates – again in comparison to that of Master graduates – in terms of conventional descriptors of professional success, e.g. occupational group, remuneration, full-time employment, permanent employment, etc.

Second, it became customary in graduate surveys that graduates were asked to rate how closely their professional situation – both vertically and horizontally – is linked to their studies.

Third, graduate surveys may try to explore the extent to which graduate employment is linked to the graduates' values and intentions: How a good job in their view could be characterised and how close their situation is to this view and how satisfied they are in their professional situation.

These three aspects are taken up in the comparative analysis in this volume because a larger number of the national surveys reported here had asked questions in that domain. Future comparative studies on issues of "employability" in the framework of the Bologna Process could make use of a wider potential of graduate surveys. We know from prior examples of national surveys and multi-country surveys that three steps towards a complex analysis can be viewed as feasible.

Fourth, graduate studies may undertake multi-variate analyses to explore the weight of various factors in explaining the varying professional success of graduates. Questions such as the following can be taken up: To what extent can professional success be attributed to the various elements of the study provisions and conditions that the graduates believe to have experienced as compared to characteristic features of their socio-economic background? To what extent does the reputation of the university, the graduates or the areas of specialisation during the course of study play a role for the graduates' early career? (cf. Teichler, 2007a, 2007c). Do we note differences in the weight of these factors with regard to graduates from Bachelor programmes with an academic emphasis as compared to a vocational emphasis, or differences in those respects between Bachelor and Master graduates (see Allen & Van der Velden, 2007)?

Such complex analyses are needed because professional success is not the same as "output" of higher education. Rather, other "intervening variables" may explain success, notably different socio-biographic preconditions of students of certain institution types, institutions and programmes, differences according to learning prior to and outside higher education, differences in the study behaviour during the course of study in higher education, processes of recruitment and job search, regional labour markets, and disciplinary labour markets. Many outcome-based university rankings or similar assessments neglect the power of these variables.

Hence, some universities are "rewarded" and others are penalised for something which is out of their reach.

Fifth, information from other sources can be taken into consideration in order to interpret differences between countries in employment of Bachelor graduates. This can be illustrated for the countries addressed in this comparative study with two examples.

We could assume that Bachelor graduates are more likely to opt for employment after graduation in countries with a high graduation rate. Table 2 shows that the graduation rate has increased on average in the eight countries for which information is available from 26 per cent in 2000 to 36 per cent in 2008. Hence, the rate varies between 25 per cent in Austria and Germany on the lower end and 51 per cent in Poland on the higher end.

Table 2. Rate of First-time Higher Education Graduates of the Corresponding Age Group in Ten European Countries (ISCED 5A, per cent)

	1995	2000	2001	2002	2003	2004	2005	2006	2007	2008
AT Austria	10	15	17	18	19	20	20	21	22	25
CZ Czech Republic	13	14	14	15	17	20	25	29	35	36
FR France	m	m	m	m	m	m	m	m	m	m
DE Germany	14	18	18	18	18	19	20	21	23	25
HU Hungary	m	m	m	m	m	29	36	30	29	30
IT Italy	m	19	21	25	m	36	41	39	35	33
NL The Netherlands	29	35	35	37	38	40	42	43	43	41
NO Norway	26	37	40	38	39	45	41	43	43	41
PL Poland	m	34	40	43	44	45	45	47	49	50
UK United Kingdom	m	37	37	37	38	39	39	39	39	35
OECD average	20	28	30	31	33	35	36	37	39	38

Source: OECD, Education at a Glance, 2010

We could also assume that the availability of jobs requiring a Bachelor-level or a Master-level degree may have an impact on the Bachelor graduates' decision to find employment after graduation; for example, they may have a better chance of being employed as managers or professionals in those countries where the proportion of these groups among the employed is very high. Table 3 shows that the share of persons in managerial and professional occupations ranges in the 10 European countries addressed in the comparative analysis from less than 20 per cent in Austria, the Czech Republic and Italy to 30 per cent and more in the Netherlands and the United Kingdom.

Table 3. Proportion of Persons Employed in Managerial/Professional Occupations and Technicians'/Associate Professional Occupation among Employed Persons in 10 European Countries 2009 (according to ISCO-88, per cent)

	Managers or professionals (ISCO 1 or 2)	Technicians and associate professionals (ISCO 3)	Other (ISCO 0, 4-9)	Total
AT Austria	17	20	62	100
CZ Czech Republic	18	24	58	100
DE Gernany	21	22	58	100
FR France	22	19	59	100
HU Hungary	22	14	64	100
IT Italy	18	20	61	100
NL The Netherlands	31	18	52	100
NO Norway	20	25	55	100
PL Poland	22	11	66	100
UK United Kingdom	30	13	57	100
EU 27	23	16	61	100

Source: EUROSTAT, LFS database[3]

Sixth, graduate surveys could try to establish the extent to which certain *profiles of competences are relevant for the professional success of Bachelor graduates*. It would not be possible to undertake competence testing in the framework of graduate surveys; in some surveys, however, graduates were asked to rate their competences upon graduation and the job requirements they perceived at the time of the survey (for example in the CHEERS study; see Schomburg & Teichler, 2006): This also provides information about the dimensions of competences where graduates seem to be already close to the job requirements at the time of graduation as compared to dimensions where catching up through learning on the job and initial training is on the agenda.

Seventh, graduate surveys could be relevant to assess the extent to which certain curricular profiles of Bachelor programmes have an impact on the subsequent employment of their graduates. If a large number of graduates from individual higher education institutions and study programmes are surveyed and if questions of the questionnaire refer to the specific profile of the institution or the study programmes, graduate surveys can be a valuable feedback for the respective Bachelor or Master programmes (see Alberding & Janson, 2007).

[3] Retrieved January 22, 2011

The need for complex and comparable graduate surveys

Graduate surveys can provide a meaningful feedback for the Bologna Process and notably for the impact of the various national strategies chosen in the implementation if they are relative complex and conceptually ambitious and if the surveys in the different countries are quite similar. The comparative analysis presented in this volume shows that a certain extent of complexity and similarity has been reached across some countries, but that further efforts are needed.

The first national graduate surveys were undertaken in some countries several decades ago. The initial surveys only collected information about a few socio-biographic elements, the field of study and the higher education institutions, the whereabouts of graduates some months after graduation, the economic sector, the occupational groups and possibly income and the location of employment. Valuable as this range of information may be, it led to over-exaggerated interpretations of the value of having studied at certain institutions and in certain fields, as well as to exaggerated conclusions as regards "over-education", i.e. graduates not employed in "appropriate" occupations. Further research showed that many graduates who were not employed in high positions noted close relevance of their studies for their work. More attention was paid to the fact that educational and professional motives are quite diverse and do not necessarily resemble those of a "homo oeconomicus"; therefore more attention was paid in graduate surveys to job orientation and job satisfaction. One noted that a link between the university from which a person graduated and professional success was not necessarily the result of the competences fostered by that university but of a credentialist recruitment policy of employers; therefore, graduate surveys began to examine the links between study provisions and conditions, competences upon graduation, job requirements and professional success. Only if those responsible for graduate surveys believe that attention should be paid to such issues when taking into account the length of a questionnaire that is acceptable for potential respondents can such a valuable thematic range be covered.

The national graduate surveys addressed in this study comprise various similar questions. But the subsequent analysis will show that there gaps as far as comparability is concerned. Identical or similar national surveys can be ambitious if a joint international graduate survey project is undertaken. Many of the countries addressed in this comparative analysis were included in the two major international graduate studies undertaken hitherto (both supported by the European Commission and various national sources). In the CHEERS study ("Careers after Higher Education: A European Research Study"), those who graduated in the academic year 1994/95 were surveyed somewhat less than four years after graduation; about 40,000 graduates from 11 European countries and Japan, i.e. about 40 per cent of those contacted responded to quite a long questionnaire – about 600 variables (see the results in Schomburg & Teichler, 2006; Teichler, 2007). In the REFLEX study ("The Flexible Professional in the Knowledge Society"), those who graduated during the academic year 1999/2000 were surveyed about five years after graduation; more than 40,000 graduates from 15 European countries and Japan, i.e. about

35 per cent of those contacted responded to a questionnaire which was about two-third of the length of the CHEERS questionnaire (see Allen & van der Velden, 2007).

These two international surveys provide a relevant account of the employment of generations of graduates who had studied in various countries prior to the Bologna cycle-structure. Thereafter, however, no similar studies have been undertaken which could be taken as an information base to assess the impact of the Bologna reform. This is because there is a readiness in various countries to continue or start to sponsor nationally representative graduate surveys. In contrast, surveys such as CHEERS and REFLEX, which had been initiated by scholars, have not been undertaken recently, and no policy initiative has been successful to create a European system of surveying graduates periodically.

If national graduate surveys will continue to be undertaken in individual European countries and no European-wide system of graduate surveys is established in the near future, the quality of the feedback of these studies for the Bologna Process will depend on a high degree of comparability of national graduate surveys. The initiators of this comparative study hope that the cooperation between those responsible for national graduate surveys will be intensified and will lead to further sophistication and greater comparability of these surveys.

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HELMUT GUGGENBERGER, MARIA KEPLINGER
AND MARTIN UNGER

MOVING TO THE BOLOGNA STRUCTURE: FACING CHALLENGES IN THE AUSTRIAN HIGHER EDUCATION SYSTEM

THE STUDY STRUCTURE IN AUSTRIA[1]

The higher education system in Austria[2] consists of universities (22 public, of which 6 are general and specialised in specific disciplinary areas, and 12 are private), 20 universities of applied sciences (UAS, *Fachhochschulen/FH*) and (since 2007) 14 university colleges (and additionally three private courses) of teacher education (*Pädagogische Hochschulen*) providing ISCED 5A education as well as other institutions offering ISCED 5B tertiary education programmes.[3] The objectives of the universities are (among others) to offer scientific or artistic education in preparation for a profession. UAS, in contrast, provide vocationally-oriented education at tertiary level. Hence, UAS also offer specialised programmes for working students and often include compulsory work placements in the study programmes. The UAS sector was set up in 1994 and is still developing today. It started with a focus on courses in economics and engineering, but has widened its scope since then to programmes in art, tourism, social work and health care. The number of available study places is expanding every year, as is the number of students.

Access to university studies is generally open. Only in a few fields (medicine, dentistry, veterinary medicine, psychology, art and music) are study places limited and admission tests required. For some studies, applicants must demonstrate their artistic talents, practical skills, or physical aptitude in addition to the matriculation examination. Students are selected through entrance examinations for UAS programmes.

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[1] Author of this chapter is Maria Keplinger

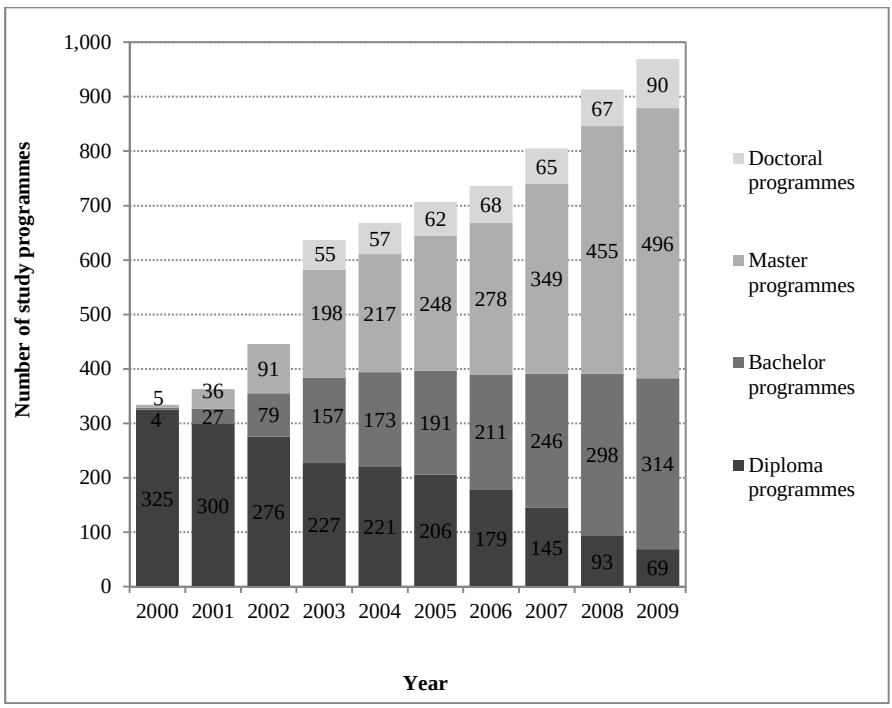
[2] See Eurydice country report in the Eurybase databank, retrieved August 13, 2010 from www.eurydice.org/portal/page/portal/Eurydice/DB_Eurybase_Home and www.bmwf.gv.at

[3] Master craftsmen/ foreman courses, technical and vocational education colleges, post-secondary colleges for medical services, and university courses.

H. Schomburg and U. Teichler (eds.), Employability and Mobility of Bachelor Graduates in Europe, 43–67.

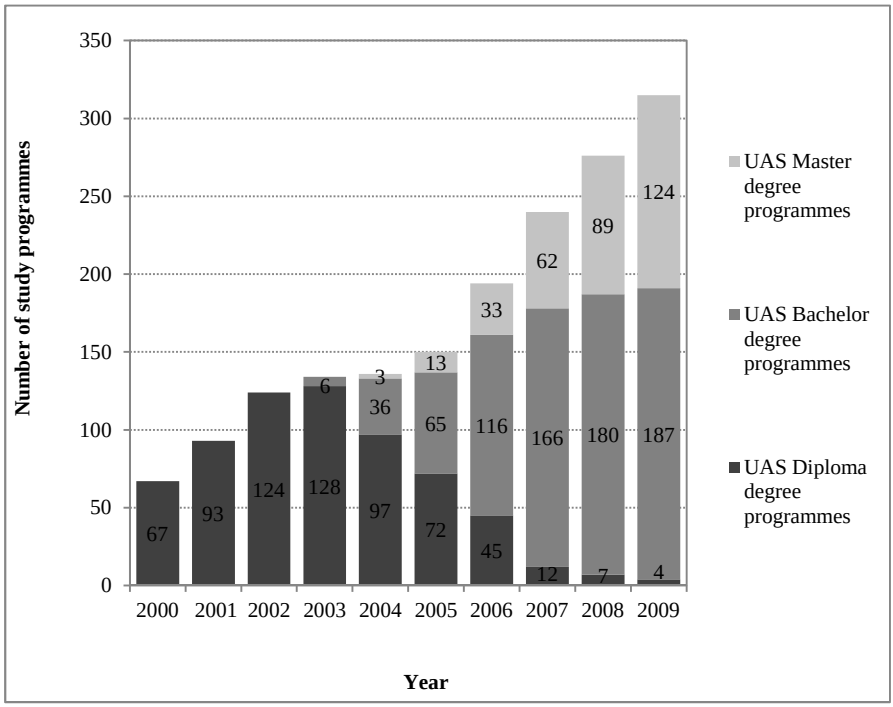
In the 1990s, the Austrian higher education system was characterised by a two-type structure, i.e. universities and UAS. Bachelor and Master programmes were introduced at public universities in 1999 and at UAS in 2002 through the University Act 2002 (*Universitätsgesetz 2002*, Bundesministerium für Wissenschaft und Forschung [bmwf], 2009a). Figures 1 and 2 illustrate the development of study programmes at universities and UAS following the three-tier Bologna structure as from 2000.

Figure 1. Development of Study Programmes at Public Universities in Austria, Winter Term 2000 to 2009 (absolute numbers)



Source: bmwf (Federal Ministry of Science and Research)

Figure 2. Development of Study Programmes at Universities of Applied Sciences in Austria, Winter Term 2000 to 2009 (absolute numbers)



Source: Fachhochschulrat (*Council of Universities of Applied Sciences*)

As of winter term 2009, 84 per cent of all study programmes at universities followed the Bachelor/Master structure. Many universities have already completed their course-conversion but medicine is still excluded. Teacher training for upper secondary education was changed with the 2009 amendment to the University Act 2002, which provides for the option of a 4-year Bachelor for certain fields.

At the UAS, 98 per cent follow the Bachelor/Master two-cycle structure and almost all private universities follow it. University colleges of teacher education have fully converted to Bachelor programmes (66 study programmes in winter term 2009) in a major reorganisation which became effective in September 2007.

Almost all new entrant students at the UAS and three quarters of those at the universities chose Bachelor study programmes in winter term 2009. At public universities, the number of students in the traditional single-cycle programmes is still relatively high (50 per cent of students are enrolled in diploma programmes). As the consequence of the gradual conversion of study programmes, a minority is awarded degrees according to the new two-cycle system.

In the recent *Studierenden-Sozialerhebung 2009* (student social survey, Unger et al., 2010), an online survey among all students at higher education institutions with

a special focus on their social situation and study conditions, 75 per cent of Bachelor students in Austria responded that they intended to enter a Master programme, and one third intended to study in the Master programme while concurrently entering the job market. Only 8 per cent wanted to engage exclusively in employment upon the award of the Bachelor degree. When asked about their study motives, 69 per cent of students in Master programmes stated that they regarded the Bachelor degree as not sufficient, although only 22 per cent said their Bachelor degree had failed to help them find an adequate job.

In order improve the recognition of the Bachelor degree in terms of its employability on the labour market and its value as academic study by the students and graduates themselves, awareness measures have been launched (for example in cooperation with the Austrian Chamber of Commerce).[4] Current discussions like the *"Dialog Hochschulpartnerschaft"* (i.e. five working groups consisting of stakeholders in higher education)[5] have also focused on the employability of Bachelor graduates. The aim of these working groups is to find a common understanding or definition of "employability" of Bachelors. The conclusion was that, in the context of higher education, it not only aims at employability in the short run, but at the acquisition of competences which enable sustainable personal and professional development, because this is the only way that graduates will be able to handle future challenges on the labour market. Job-descriptions and possibilities for professional developments should be included in the curricula in order to raise the acceptance of this "new" degree.

GRADUATE SURVEYS USED FOR THE ANALYSIS[6]

Arbeitssituation von Universitäts- und FachhochschulabsolventInnen

The recent survey "*Arbeitssituation von Universitäts- und FachhochschulabsolventInnen (ARUFA)*" (in English: The working situation of graduates from universities and UAS) is the most comprehensive graduate survey ever undertaken in Austria. Graduates from Austrian public universities and from UAS were surveyed from December 2009 to February 2010. The survey addressed the five graduation cohorts from the academic year 2003/04 to the academic year 2007/08. It was designed as a total population survey undertaken through internet with the help on an online questionnaire. The study, which was commissioned by the Austrian Federal Ministry of Education, was undertaken by the International Centre for Higher Education Research of the University of Kassel (Germany) (INCHER-Kassel) – under the direction of Harald Schomburg – in cooperation with the Department of Soci-

[4] Booklet "Bachelor welcome!" (Wirtschaftskammer Österreich & Bundesministerium für Wissenschaft und Forschung, 2010)

[5] A series of discussion events held during the first half of 2010 in 5 working groups with stakeholders representing the university and UAS area (Retrieved August 13, 2010 from http://www.bmwf.gv.at/startseite/dialog_hochschulpartnerschaft_ergebnisse/)

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ology (IfS) at the Alpen-Adria University of Klagenfurt and was coordinated by Helmut Guggenberger. The graduates from all 21 universities (as defined according to the University Act 2002) were contacted using the Universities' Data Network run in Vienna by the *Bundesrechenzentrum* (*BRZ*; federal computing centre of Austria). Graduates from the UAS were contacted in most cases by the Department of Sociology at Klagenfurt, which was provided with graduate address details by the individual organisations in charge of the UAS; in total, 15 UAS took part.

The ARUFA study yielded 25,669 responses with a response rate of 25 per cent. This can be viewed as highly satisfactory given the typical problems of online surveys and the declining willingness to participate in surveys, and as representative. In order to ensure a better similarity to the other country reports, the following analysis is based only on the graduates of the academic years 2006/07 and 2007/08 who responded; thus responses which had been provided between about 1½ and 2½ years after graduation are treated. Of the approximately 9,600 respondents included in the analysis, 17 per cent are Bachelor graduates from universities and 6 per cent from universities of applied science. Graduates from traditional study programmes prevail: 62 per cent from universities and 15 per cent from UAS. Master graduates are not included because their number is marginal among the respondents as a consequence of the gradual conversion of the study programmes to the Bachelor-Master structure.

Studierenden-Sozialerhebung 2009

The *"Studierenden-Sozialerhebung 2009"* is an online survey covering all students at public higher education institutions in Austria. All students at those institutions were invited in May/June 2009 via e-mail to participate, and more than 42,000 (out of approx. 265,000) did so. The *Sozialerhebung* covers a wide range of topics. In 2009, questions were added asking students in Master programmes about their experiences on the labour market as Bachelor graduates. The subsequent analysis will only comprise those Bachelor graduates who are named here "consecutive Master students".

SOCIO-BIOGRAPHIC BACKGROUND AND COURSE OF STUDY[7]

58 per cent of the recent graduates participating in the ARUFA study are female. As can be seen in table 1, women comprise more than 60 per cent of those who studied at universities, but less than half of those who studied at UAS.

More than one third of the graduates have parents (father and/or mother) with higher education. Among the graduates of traditional programmes, this share was by far higher amongst university graduates (41 per cent) than of those from UAS (23 per cent). The respective difference is clearly smaller among Bachelor graduates (37 per cent as compared to 29 per cent).

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91 per cent are Austrian citizens. 7 per cent had not acquired their *higher education entrance qualification* in Austria (more than one third in Italy, almost one third in Germany and about one sixth in East European countries). The share of foreign graduates and of those having been educated abroad prior to study is about twice as many at universities as at UAS (see table 1).

Table 1: Socio-biographical Background and Course of Study of 2007 and 2008 Graduates from Higher Education Institutions in Austria (per cent)

	Bachelor graduates			Trad. graduates			Total		
	Univ.	UAS	All	Univ.	UAS	All	Univ.	UAS	All
Female graduates	57	44	54	63	47	60	61	46	58
A-typical entry qualification	52	69	57	43	66	48	45	67	50
Father and/or mother with an HE degree	37	29	35	41	23	37	40	25	37
Foreign graduates	12	5	10	10	5	9	10	5	9
Entry qualification abroad	9	3	8	7	3	7	8	3	7
Vocational training before HE	37	52	41	30	53	34	31	52	36
Total years of study in HE									
arithmetic mean	4.1	2.9	3.7	6.8	4.0	6.3	6.2	3.6	5.7
median	3.6	2.8	3.3	6.2	3.9	5.7	5.8	3.8	5.1
Age at time of graduation									
arithmetic mean	25.5	26.1	25.7	28.0	27.4	27.9	27.5	27.0	27.4
median	24.0	24.0	24.0	26.0	25.0	26.0	26.0	25.0	26.0
N	1,624	625	2,249	5,959	1,415	7,374	7,697	2,063	9,851

Source: INCHER-Kassel, Austrian Graduate Survey 2010 (ARUFA)

More than half had taken a "traditional" route to higher education, i.e. first attending a general secondary school (AHS), and almost one third had gone to a secondary vocational school (BHS) (30 per cent); only 4 per cent had followed a "non-traditional" access path (higher education entrance examination or similar). One third had completed their *vocational education* prior to study (e.g. apprenticeship or secondary vocational school), and seven out of ten had gained previous professional experience (full-time or part-time work; during or after secondary education, in any case before enrolment in higher education); hence, both vocational training and professional experience were more common among those from UAS than among those from universities.

The *period of study leading to the first degree* lasted on average 5.7 years for graduates from the academic years 2006/07 and 2007/08. In the cases of Bachelor graduates from UAS, the average period of study (2.9 years) was not longer than the required period of study, while university Bachelor graduates studied on aver-

age 4.1 years. The graduates from traditional study programmes not only studied longer (4.0 years and 6.8 years of study), but also prolonged their study beyond the required length of study more often.

For about two-thirds, study had been the *main activity* (this proportion was slightly higher among Bachelors). More than eight out of ten had taken part in a *study-related work placement*: about half completed a *compulsory internship* (almost half in the case of Bachelors).

The average age at the time of the graduation was 25.5 years among university Bachelor graduates and 26.1 per cent among graduates from universities of applied science. The average among graduates from traditional programmes was 28.0 and 27.4 years respectively, as is seen in table 1. One must bear in mind that student at UAS are older on average when they enrol for the first time, since a higher proportion is active in vocational training and gainful employment than among university students.

As regards their life situation, three quarters of the respondents in the Austrian ARUFA study reported a partnership at the time of the survey (partner 53 per cent, married 21 per cent and registered partnership 1 per cent). 19 per cent had one child or more living with them. Daytime childcare is most frequently provided by the partner (61 per cent), followed by parents or relatives (34 per cent), kindergarten/crèche or similar (35 per cent), and less often (24 per cent) by the respondents themselves.

INTERNATIONAL MOBILITY[8]

Like in other countries, international student mobility is perceived as a challenge posed by the Bologna Process, and there is a declared target that 50 per cent of students in Austria should acquire overseas experience by 2020 (see Bundesminsterium für Wissenschaft und Forschung [bmwf], 2008a, pp. 290f.; Bundesminsterium für Wissenschaft und Forschung [bmwf], 2008b, p. 6; Bundesminsterium für Wissenschaft und Forschung [bmwf], 2009b, pp. 54-59; Bundesminsterium für Wissenschaft und Forschung [bmwf], 2010, p. 26). There are arguments that student mobility may even drop in the new two-cycle structure of study programmes (see e.g. Kellermann, Boni & Meyer-Renschhausen, 2009; Heissenberger, Mark, Schramm, Sniesko & Süss, 2010). What do the data of the Austrian study reveal in this regard?

Study abroad

According to the *Sozialerhebung 2009,* 13 per cent of all Bachelor students in Austria already have study-related experiences in a foreign country; most studied for at least a semester abroad, did an internship or attended a language class. Among Master students, this ratio is 35 per cent. Nearly every fifth Master student

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studied at least partially in a foreign country, namely during the Bachelor or the Master programme. 13 per cent did an internship, 6 per cent participated in a summer school, 6 per cent followed a language course and 5 per cent did research. One must bear in mind that the *Sozialerhebung* comprises students of various years of study (from beginners to students close to graduation); therefore the data do not show what proportion of students will be mobile up to graduation. Yet, they allow one to infer that temporary mobility is more likely to happen during the Master programme than during the Bachelor programmes.

Table 2. International Mobility during the Course of Study and after Graduation of 2007 and 2008 Graduates from Higher Education Institutions in Austria (per cent)

	Bachelor graduates			Trad. graduates			Total		
	Univ.	UAS	All	Univ.	UAS	All	Univ.	UAS	All
a. During the course of study									
Study abroad and/or short study-related activities abroad	24	33	27	37	40	37	34	38	35
... Temporary study abroad	16	22	18	24	24	24	22	23	22
... Short study related activities abroad	14	19	15	23	26	23	21	24	22
b. After graduation									
Study and/or practical training abroad after graduation	25	17	23	13	7	12	15	9	14
Employment abroad after graduation	12	12	12	20	22	20	18	19	18
... At present employed abroad	9	9	9	11	8	11	11	8	11

Source: INCHER-Kassel, Austrian Graduate Survey 2010 (ARUFA)

According to the ARUFA survey, more than one fifth of the graduates from Austrian universities had spent a study period abroad: 16 per cent of the university Bachelor graduates, 22 per cent of the Bachelor graduates from UAS and about 22 per cent from traditional programmes at both types of higher education institutions (see table 2). It does not come as a surprise to note that somewhat more university graduates from traditional programmes have studied abroad than university Bachelor graduates. This does not mean, however, that the new Bologna two-cycle structure has led to a decline in student mobility, because most Bachelor graduates continue to Master study and may be mobile in the second cycle. Thus, the actual frequency of study abroad up to graduation in the new two-cycle system will only be known when sufficient information is available on graduates from the Master programmes. It is exceptional in Austria, though, that students from other type of higher education study abroad in larger numbers than university students. Howev-

er, the Bachelor graduates from UAS have spent on average a shorter period abroad (7 months as compared to 8 months).

Students who do not study abroad often give as a reason for not studying their concern that study abroad may prolong the overall study period. Other concerns are, according to the student surveys above, separation from family/friends, costs incurred to keep their accommodation in Austria and costs related to the sojourn abroad. Students having studied abroad most frequently see the costs of the sojourn abroad as the major barrier.

Employment abroad after graduation

12 per cent of the university Bachelor graduates and of those from universities of applied science were employed abroad after graduation for some period. These rates were somewhat lower than among the graduates from traditional single-cycle programmes, as table 2 shows. At the time of the survey, the proportion of those employed abroad was slightly higher at universities than at universities of applied sciences: 11 per cent as compared to 8 per cent among graduates from traditional programmes.

The choice of host country can be an indication of the purpose of mobility. For instance, some of student mobility between Germany and Austria is linked to the delicate issue of "numerus clausus refugees"; mobility from and to some countries may be interpreted as "brain drain" or "brain gain". Most of the mobile graduates from Austria are employed in Germany and Italy (together about 60 per cent of the professionally mobile graduates).

Other questions posed in the questionnaire show that graduates consider international competences and foreign language proficiency as not ranking highly among the employers' recruitment criteria. But about 40 per cent believe that their company or other employing institutions is active in an international sphere.

EMPLOYMENT AND FURTHER STUDY OF BACHELOR GRADUATES[9]

Whereabouts after graduation

More than two-thirds (68 per cent) of Bachelor graduates of the academic year 2007/08 from universities in Austria stated, when asked about their whereabouts one-and-a-half year after graduation, that they continued their studies. This share was lower amongst graduates from UAS: yet, a majority of them (54 per cent) also opted for further study, as table 3 shows. About four out of five Bachelor graduates who continue their studies were enrolled in Master programmes.

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Table 3. Whereabouts of 2008 Graduates from Higher Education Institutions in Austria (per cent)

	Bachelor graduates			Trad. graduates			Total		
	Univ.	UAS	All	Univ.	UAS	All	Univ.	UAS	All
Employed (only)	26	42	31	62	83	66	54	69	57
Professional training	1	1	1	5	2	4	4	2	3
Study and employment	28	23	26	14	7	13	17	12	16
Study (only)	40	31	37	10	3	9	17	13	16
Search for job (without employment)	2	1	2	3	3	3	3	2	3
Family, children, etc.	1	1	1	2	1	2	2	1	2
Other	1	2	1	4	1	3	3	1	3
Total	100	100	100	100	100	100	100	100	100
Count	790	359	1,149	2,678	669	3,347	3,522	1,035	4,590

Source: INCHER-Kassel, Austrian Graduate Survey 2010 (ARUFA)

However, many of those who continued their studies did this in conjunction with employment: 28 per cent and 23 per cent respectively. A further one per cent was in professional training for public service – an arrangement which can also be viewed as combining employment and further learning.

26 per cent of Bachelor graduates from universities solely opted for employment. As one might expect, this proportion was higher among graduates from UAS (42 per cent). As about a quarter of the Bachelor graduates continues study whilst being employed, the overall proportion of employed Bachelor graduates (i.e. including those studying concurrently) was 55 per cent among university Bachelor graduates and 66 per cent among graduates from UAS. As one does not know whether the option of both study and employment will lead to an advanced degree or if it is just a temporary arrangement which delays the decision for either direction, a genuine rate of transition from Bachelor study to employment can only be established a few years later.

Very few Bachelor graduates reported that they neither studied nor were employed one and a half years after graduation (4 per cent each). Among them, only 2 per cent of the Bachelor graduates from universities and 1 per cent of those from UAS were unemployed.

In this context, the reported *motives for studying* are rather interesting. The following aspects were of particular significance for the decision about the choice of course of study leading to the first degree: “Personal development; professional interest in the course content; inclination/talent”, as well as “Working on an interesting topic” – in other words, aspects relating to character or to the degree courses themselves. Professional aspects were quoted somewhat less frequently: “Having a wide range of career opportunities”, “A particular career aspiration, “Good opportunities on the labour market”, as well as the “Opportunity to achieve a secure

professional position". In contrast, "Recommendations by parents/relatives" as well as the desire to "maintain the student status" hardly played any role.

As regards *professionally oriented motives*, almost two-thirds of the Bachelor graduates reported that they wanted to specialise in a particular area of expertise. About half each quoted "Particular professional aspiration", "Good labour market opportunities" and "Secure professional position". The latter two motives were more frequently voiced by Bachelor graduates from UAS than by those from universities.

It is interesting in this context to note that graduates report in retrospect a high degree of *satisfaction* with their study: about three-quarters of Bachelor graduates from UAS and about two-thirds of Bachelor graduates from universities stated that they were "very satisfied" or "satisfied" with their study programme overall (see table 4). And about seven out of ten stated that they would choose the same programme again. In sum, the widespread simplistic argument often put forward in the public discourse on the Bologna study reform is not supported by the results of this survey: The arguments that Bachelor graduates opt for continued study because of lack of "employability".

Table 4. Satisfaction with the Course of Study of 2008 Graduates from Higher Education Institutions in Austria (per cent)

	Bachelor graduates			Trad. graduates			Total		
	Univ.	UAS	All	Univ.	UAS	All	Univ.	UAS	All
1 Very satisfied	19	25	21	19	29	21	19	28	21
2	47	50	48	48	51	49	48	51	48
3	23	20	22	24	15	22	24	17	22
4	10	5	8	7	4	7	8	4	7
5 Very dissatisfied	2	0	1	2	1	2	2	1	2
Total	100	100	100	100	100	100	100	100	100
N	830	373	1,203	2,778	686	3,464	3,665	1,066	4,767
Combined values									
Satisfaction (1 and 2)	66	75	69	67	80	70	67	79	69
3	23	20	22	24	15	22	24	17	22
Dissatisfaction (4 and 5)	11	5	9	9	5	8	9	5	8
Arithmetic mean	2.3	2.0	2.2	2.2	2.0	2.2	2.3	2.0	2.2

Question D8: How satisfied are you with your studies in general?

Source: INCHER-Kassel, Austrian Graduate Survey 2010 (ARUFA)

In the *Studierenden-Sozialerhebung 2009*, Master students were asked about their *reasons for the continuation of study after the award of the Bachelor degree*. More than half of the "consecutive" Master students stated that they never planned to enter the labour market after finishing their Bachelor studies. Notably, a large pro-

portion of Master students in the Natural Sciences stated this, and in various disciplines more women than men reported that they never planned to embark on employment after the award of the Bachelor degree.

Among Master students at UAS the answer pattern is quite different.

UAS offer two different types of programmes: On the one hand full-time programmes and on the other programmes for working students where lectures are given in the evenings, at weekends and during holidays. Both types of programmes provide 60 ECTS per year, hence programmes for working students are not part-time by nature, because they comprise the same amount of lectures per year as full-time programmes. Nevertheless, both types of programmes attract very different types of students, as seen for example in the fact that students in programmes for working students are on average six years older (namely around 30 years) than their colleagues in full-time programmes.

Even though, we see a higher transition rate from Bachelor to Master studies among graduates from programmes for working students than among those from full-time programmes, far more graduates from programmes for working students looked for a job: half the graduates in Business Administration and 40 per cent of the Engineers compared to 7 per cent of graduates in Business Administration and 27 per cent of Engineers from full-time programmes. On the other hand, only about 5 per cent of the graduates from programmes for working students stated they had never thought about looking for a job after graduation. Among Master students in full-time programmes, this ratio differs between 58 per cent in Engineering studies and 84 per cent – the highest ratio of all student groups – in Business Administration.

Hence, not surprisingly, students in programmes for working students want to continue studying alongside their work. However, we suppose their transition rate to Master programmes to be higher, because a Bachelor is of less value than their already accomplished years of vocational experience. Only a Master provides them with a comparative advantage for their future career. Hence the situation for (mainly young) graduates from full-time programmes at UAS: They have chosen an applied education programme because they wanted to enter the labour market quickly and with more practical experience than from a Scientific University. Hence, it is rational for many of them to leave the education system at least temporarily. That seems especially true in Engineering studies, where the labour market has a great demand for graduates.

Almost half of all students in consecutive Master programmes had the impression that there were no adequate jobs in their field of study available for Bachelor graduates. This is far more often stated by female Master students than by male Master students. As regards fields of study, we note that many students in natural sciences and in the humanities perceive such a lack of suitable employment opportunities. Similarly, only a quarter of the Master students see the Bachelor degree as a sufficient entry qualification for a career. Altogether, three quarters of the Master students believe that a Bachelor graduate is not regarded (and paid) as a higher education graduate in the Austrian labour market. On this point, both genders, students of all ages and in most fields of study agree to the same extent. It does not

come as a surprise to note that Bachelor graduates who had opted for employment see the employment opportunities of Bachelor graduates more favourably. But even then most of them state that Bachelor graduates are not treated in the labour market as really being graduates.

JOB SEARCH[10]

The most common routes taken during the search for employment (often multiple answers) were "Applying for advertised jobs" as well as "Direct contact to employers or clients/blind applications, unsolicited applications". "Assistance from friends, acquaintances or fellow students" as well as "Internships during the course of studies" were quoted much less often. Asked about the success of the methods employed, four out of ten said "Applying for advertised jobs", almost two out of ten stated "Direct contact to employers or clients/blind applications, unsolicited applications" and one out of ten "Assistance from friends, acquaintances or fellow students". Only one per cent reported that they found their job with the help of the employment service or company contact fairs.

"Employability", the second keyword in the Bologna Process in addition to "mobility", is seen in Austria as a very important challenge. The Ministry in charge calls it "Förderung der Beschäftigungsfähigkeit von Absolventinnen und Absolventen mit Bachelorabschluss, auch im öffentlichen Dienst" (in English: "Promoting the employability of graduates with a Bachelor's degree, including public service", see bmwf, 2009b, p. 40). Critique as regards this target is often voiced (see e.g. Liessmann, 2006; Prisching, 2008). It might be premature to assess the link between Bachelor studies and employment (see the arguments in Campbell & Brechelmacher; 2007, Schneeberger, Petanovitsch & Nowak, 2010). At present, we note that many students perceive their studies as being "complete" only upon graduation from a Master programme (see Schneeberger & Petanovitsch, 2010a), even though the Bachelor degree is supposed to be a "complete" qualification according to the Bologna rationales.

In the ARUFA survey, graduates were also asked to report the duration of the *search period* for employment. Among those who were seeking for a job, Bachelor graduates from universities reported 4.9 months of search on average, while search took less long for Bachelor graduates from UAS: 3.2 months on average (see table 5).

[10] Author of this chapter is Helmut Guggenberger

Table 5. Duration of Job Search and Time from Graduation to First Employment of 2008 Graduates from Higher Education Institutions in Austria (means)

	Bachelor graduates			Trad. graduates			Total
	Univ.	UAS	Total	Univ.	UAS	Total	
a. Job search duration							
Arithmetic mean	4.9	3.2	4.3	4.6	3.9	4.4	4.4
Median	3.0	2.0	3.0	3.0	3.0	3.0	3.0
N	154	92	246	1,119	321	1,440	1,686
b. Time from graduation to first employment							
Arithmetic mean	4.9	2.3	4.0	3.2	2.1	3.0	3.1
Median	.0	.0	.0	1.0	.5	1.0	1.0
N	322	187	509	2,035	490	2,525	3,034

Source: INCHER-Kassel, Austrian Graduate Survey (ARUFA) 2010

PROFESSIONAL SUCCESS[11]

The tasks of higher education institutions and the measurement of professional success

The Universities' Act of 2002 (§ 3) specifies the various tasks of Austrian universities, among them: "3. Scientific, artistic, artistic-pedagogical and artistic-scientific pre-professional education, qualification for professional activities that require the application of scientific knowledge and methods, as well as the development of artistic and scientific skills up to the highest level" (bmwf, 2009a, p. 16). (This is followed by "4. Training and encouragement of young scholars and artists" and "5. Further education, particularly of graduates" (ibid., p. 16-17). The Studies Act for UAS states the tasks of these institutions as follows in § 3: "1) Degree programmes offered at UAS are programmes at university level expected to provide scientifically-based vocational training. The primary goals are: 1. To ensure practical training at university level; 2. To impart the ability to solve the tasks faced by the respective professional field in accordance with current scientific knowledge and with practical requirements; 3. To promote the permeability of the educational system and the professional flexibility of graduates" (Fachhochschul-Studiengesetz, 2010).

The laws clearly expected study programmes of UAS to be more closely geared to the preparation for future occupations than those of universities. No specific reference is made to sectors, e.g. the (decreasing) public and (increasing) private sector, or to employment status, e.g. employed vs. self-employed: The latter is quite large among graduates from Austrian universities, as the CHEERS survey

[11] Author of this chapter is Helmut Guggenberger

had shown for graduates from the mid-1990s (8 per cent; see Guggenberger, Kellermann & Sagmeister, 2001, p. 6) and the REFLEX survey for those graduating around 2000 (11 per cent of university and UAS graduates; see Guggenberger, Kellermann, Sagmeister & Steingruber, 2007, p. 25).

It is not difficult to provide information about various dimensions of employment. It is not clear from the outset, though, how one can measure what to describe the vocational routes of graduates from different institutions of the tertiary sector using statistical criteria. How should one measure something called "professional success"? In the framework of this publication, the authors agreed to examine the share of graduates employed full-time and employed permanently, the income, the adequacy of level of educational attainment and position as well as the use of knowledge, and finally job satisfaction.

In the subsequent analysis, those Bachelor graduates are compared to those from traditional programmes who are solely employed. This choice was made because the employment situation of graduates who work and study can be viewed as atypical for graduates' career prospects. Often, jobs which help to fund studies are chosen deliberately, although they are not considered as matching the level of educational attainment. Moreover, it should be stated that the comparison of income according to type of study programme or higher education institution is only undertaken for full-time employed graduates.

Employment conditions

When employed for the first time, about six out of ten Bachelor graduates were employed full-time, and about the same proportion had a permanent contract. The findings presented in table 6 refer to the time when the survey was conducted, i.e. between about 1½ years after graduation. At that moment in their career, full-time employment of Bachelor graduates had progressed further: 65 per cent of university Bachelor graduates and 83 per cent of Bachelor graduates from UAS. These rates are lower than the respective rates among graduates from traditional programmes (79 per cent and 91 per cent respectively). But these findings certainly do not confirm frequent claims that graduates face a high risk of ending up in precarious employment.

This can be underscored as well with data about the rate of permanent employment at the time of the surveys. 80 per cent of university Bachelor graduates and 86 per cent of Bachelor graduates from UAS were permanently employed when this survey was conducted. The rates did not differ much from the respective rates of graduates from traditional programmes.

Table 6. Aspects of Professional Success of 2008 Graduates from Higher Education Institutions in Austria who are only Employed One and a Half Years after Graduation (per cent)

	Bachelor graduates			Trad. graduates			Total		
	Univ.	UAS	All	Univ.	UAS	All	Univ.	UAS	All
Full-time employed	65	83	73	79	91	82	78	89	81
Unlimited term contract	80	86	82	77	90	80	78	89	80
Vertical match	77	83	80	86	88	87	85	87	86
Horizontal match	48	51	49	47	54	49	48	53	49
Job satisfaction	71	73	72	73	78	74	73	77	74
N	371	248	619	3,086	938	4,024	3,505	1,202	4,744

Source: INCHER-Kassel, Austrian Graduate Survey (ARUFA) 2010

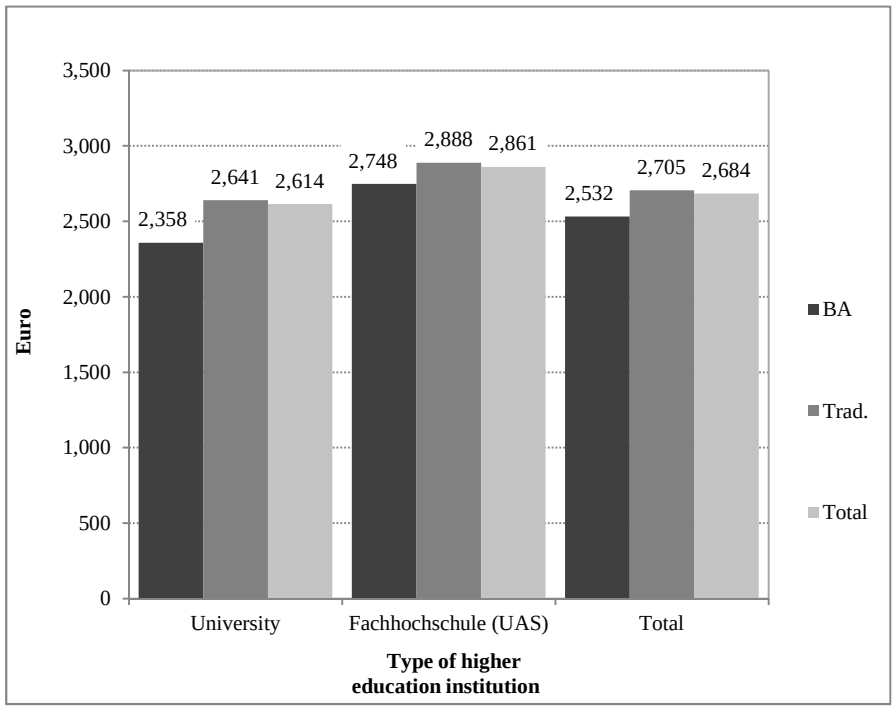
It is interesting to note that there are substantial differences by field of study as far as full-time employment is concerned: Only 46 per cent of university Bachelor graduates from the humanities and social sciences were employed full-time when the survey was conducted, as compared to 83 per cent of those from economic fields. In contrast, the proportion of those who are permanently employed varied by groups of fields of study between 77 per cent and 82 per cent.

Income

The average *gross monthly income* of full-time employed Bachelor graduates from universities was about 2,358 € about 1½ years after graduation, as compared to 2,641 € for those from traditional university programmes. Thus, Bachelor graduates from universities earn only 11 per cent less than graduates from the long university programmes.

It is worth mentioning that the average income of graduates from universities of the applied sciences is even higher than that of university graduates. This can be explained to a certain extent by the different composition according to fields of study and related occupational areas and is influenced by the fact that the former more often have already been professionally active than the latter. This notwithstanding the formers' income is impressive. Bachelor graduates from UAS have on average an even higher income (2,748 €) than those from traditional university programmes (2,614 €), and their income is only 5 per cent less than that of graduates from traditional programmes of the UAS.

Figure 3. Gross Monthly Income of 2008 Graduates from Higher Education Institutions in Austria (means)



Question F5: What is your gross monthly income? (incl. special payments and overtime)

Source: INCHER-Kassel, Austrian Graduate Survey (ARUFA) 2010

As one might expect, the average income varies substantially by groups of field of study: University Bachelor graduates from the humanities and social sciences (1,801 €) earn only about seven-tenth as much as those from engineering (2,644 €), and graduates from UAS in mathematics and natural sciences (2,126 €) have a similar income disadvantage to those from engineering (2,960 €). These differences by field among the Bachelor graduates, however, are not greater than those by field among graduates from traditional study programmes.

Links between study and employment/work

The *vertical relationships between study and employment* was addressed in the ARUFA survey with the help of the question "In your opinion, what is the most appropriate academic level for your current occupation?". In table 6, the responses "My degree level" and as well the few responses "A higher degree level" are classified as a vertical match, whereas the responses "A lower degree level" and "No degree required" are viewed as not matching (see also table 7).

As table 6 shows, six out of seven graduates surveyed consider that their occupation requires at least their level of degrees. As can be seen in table 7, among university Bachelors, the proportion of those who believed that a lower level of educational attainment would have been appropriate (34 per cent) was 3 per cent higher than among Bachelor graduates from UAS (31 per cent). This proportion was lower among graduates from traditional programmes (24 per cent and 21 per cent respectively). It is difficult to say whether such a difference can be explained as being so high that it is likely to cause decisions on the part of the university Bachelor graduates to opt for further study rather than for employment after the award of their degree.

Table 7. Link between Level of Education and Present Job Perceived by 2008 Graduates from Higher Education Institutions in Austria being solely Employed One and a Half Years after Graduation (per cent)

	Bachelor graduates			Trad. graduates			Total		
	Univ.	UAS	All	Univ.	UAS	All	Univ.	UAS	All
A higher academic degree	9	11	10	6	5	6	6	6	6
My academic degree	57	59	58	70	74	71	69	71	70
A lower academic degree	11	14	12	10	9	10	10	10	10
No academic degree necessary	23	17	20	14	12	13	15	13	14
Total	100	100	100	100	100	100	100	100	100
N	368	242	610	3,059	936	3,995	3,474	1,193	4,701

Question H3: In your opinion, which academic degree is best suited for your current job?

Source: INCHER-Kassel, Austrian Graduate Survey (ARUFA) 2010

The ratings of a vertical match are exceptionally low in two cases: 61 per cent of the university Bachelor graduates from the humanities and social sciences and 69 per cent of those from mathematics and natural sciences. In all other categories of institutional types, programme types and disciplinary groups, the respective ratio varies between about three-quarters and almost all respondents.

The *horizontal match* presented in table 6 is measured by asking the graduates about the extent to which the knowledge they had acquired in the course of study was used on the job. As can be seen in table 6 and 8, the responses vary only moderately according to type of degree and type of higher education institution. About half each of Bachelor graduates from both types of institutions stated that they used their competences to a high extent; the same holds true for graduates from traditional study programmes.

Table 8. Utilisation of Knowledge and Skills Acquired during the Course of Study in Current Job Perceived by 2008 Graduates from Higher Education Institutions in Austria who are solely Employed One and a Half Years after Graduation (per cent)

	Bachelor graduates			Trad. graduates			Total		
	Univ.	UAS	All	Univ.	UAS	All	Univ.	UAS	All
1 To a very high extent	14	17	16	15	12	14	15	14	14
2	34	33	33	33	41	35	33	40	35
3	28	34	30	33	35	34	33	34	33
4	17	13	16	16	11	15	16	11	15
5 Not at all	6	2	5	3	1	3	4	1	3
Total	100	100	100	100	100	100	100	100	100
N	373	241	614	3,063	928	3,991	3,483	1,184	4,702
Combined values									
High extent (1 and 2)	48	51	49	47	54	49	48	53	49
3	28	34	30	33	35	34	33	34	33
Low extent (4 and 5)	24	16	21	19	12	18	20	12	18
	2.7	2.5	2.6	2.6	2.5	2.6	2.6	2.5	2.6

Question H1: If you take into consideration your current work tasks altogether: To what extent do you use the knowledge and skills acquired in the course of study?

Source: INCHER-Kassel, Austrian Graduate Survey (ARUFA) 2010

It can be added that less than one-third of Bachelor graduates, but slightly more than one-third of graduates from traditional programmes considered their chosen field of study as “the only possible/by far the best” to fulfil their professional tasks (see table 9). A higher proportion, among them more Bachelor graduates than graduates from traditional programmes agreed to the statement “some other fields could prepare for the area of work as well”. About a quarter of the graduates opted for one of the two remaining categories which indicate a low horizontal match: “another field would have been more useful” and “the field of study does not matter very much”, among them a slightly higher proportion of Bachelor graduates than of graduates from traditional programmes.

Table 9. Link between Field of Study and Work Tasks Perceived by 2008 Graduates from Higher Education Institutions in Austria who are solely Employed One and a Half Years after Graduation (per cent)

	Bachelor graduates			Trad. graduates			Total		
	Univ.	UAS	All	Univ.	UAS	All	Univ.	UAS	All
My field of study is the only possible/by far the best field for my present work tasks	28	26	27	40	22	36	39	23	35
Some other fields could prepare for the area of work as well	41	48	44	37	57	42	38	55	42
Another field would have been more useful for my present work tasks	11	7	10	10	9	10	10	9	9
In my present work the field of study does not matter very much	20	19	20	13	12	13	14	13	14
Total	100	100	100	100	100	100	100	100	100
N	369	241	610	3,056	935	3,991	3,472	1,191	4,697

Question H2: How would you characterise the relationship between your field of study and your area of work?

Source: INCHER-Kassel, Austrian Graduate Survey (ARUFA) 2010

Asked to take into consideration "all aspects of their professional situation (status, position, income, scope of duties etc.) related to their current occupation" and to rate on that basis the extent to which their occupation is commensurate to their training, about 60 per cent of the respondents noted a clear link between study and work. This was stated by Bachelor graduates slightly less frequently than by graduates from traditional programmes.

Those who accepted a job that was not linked clearly to their study were asked why they opted for this job. About a quarter each of the Bachelor graduates gave the following two reasons: "This job represents an interim stage, as the respondent is still in the process of occupational orientation" and "the job allows for activities that are flexible in time". Less than one fifth each agreed to the following response categories "this job makes it possible to work in a desired location" and "the current occupation offers greater security. Only slightly more than one tenth stated that they had not yet found a suitable occupation.

In response to the question whether their professional situation corresponded to their expectation at the start of their study almost half of the graduates – both Bachelor graduates and graduates from traditional study programmes stated that their current professional situation was "much better" or "better than expected". Only one sixth of the Bachelor graduates and even slightly fewer of the graduates from traditional programmes considered their professional situation as "worse" or even "far worse than expected".

Job satisfaction

In response to the question about the extent to which they are *satisfied overall with their professional situation*, graduates from the different types of study programmes and institutional types reacted in a similar way: Around three quarters stated that they were "very satisfied" or "satisfied" (see table 4 and 10). The previous comparative studies – CHEERS and REFLEX – had already shown that the average job satisfaction of graduates from Austrian institutions of higher education was among the highest of the European countries surveyed.

Table 10. Job Satisfaction of 2008 Graduates from Institutions of Higher Education in Austria (per cent)

	Bachelor graduates			Trad. graduates			Total		
	Univ.	UAS	All	Univ.	UAS	All	Univ.	UAS	All
1 Very satisfied	30	35	32	29	28	29	29	29	29
2	42	38	40	44	50	46	44	48	45
3	18	17	17	18	14	17	18	15	17
4	8	8	8	7	5	6	7	6	6
5 Very dissatisfied	3	2	2	3	3	3	3	2	3
Total	100	100	100	100	100	100	100	100	100
N	371	248	619	3,086	938	4,024	3,505	1,202	4,744
Combined values									
Satisfied (1 and 2)	71	73	72	73	78	74	73	77	74
3	18	17	17	18	14	17	18	15	17
Dissatisfied (4 and 5)	11	10	11	9	8	9	9	8	9
Arithmetic mean	2.1	2.0	2.1	2.1	2.0	2.1	2.1	2.0	2.1

Question G5: How satisfied are you with your current job?

Source: INCHER-Kassel, Austrian Graduate Survey (ARUFA) 2010

There are some variations by field of study. Less than 70 per cent among university graduates from humanities and social sciences expressed a high degree of satisfaction- both those with a Bachelor (63 per cent) and those with a traditional degree (66 per cent). The same held true for university Bachelor graduates in mathematics and natural sciences (65 per cent) and for graduates from the UAS in engineering (69 per cent).

CONCLUSIONS

Two recent headlines can serve to illustrate aspects of the public discourse on academic degrees in Austria: “Increasingly precarious working conditions for academics” (Austria Presse Agentur, 2010); “Rising unemployment among academics despite positive trend” (derstandard.at, 2010). These and similarly striking phrases point to two reasons for public concern: There is “poor” (here: precarious) occupation or “unemployment” (i.e. no occupation) for university graduates. While the first information is based on a study conducted by the Austrian Institute for Research on Vocational Training[12] (see Schneeberger & Petanovitsch, 2010b), the second rests on the labour market statistics that are continuously produced by the AMS (Labour Market Service) – however, neither of these sources suggests such sensational headlines. The results of the project “The Working Situation of Graduates from Universities and Universities of Applied Sciences” can contribute to a factual and data-based discussion about the employability and professional relevance of graduates from higher education institutions in Austria.

In the winter semester of 2008/09 Austrian universities offered a total of 298 Bachelor, 455 Master and 93 Diploma degrees for enrolment; in 2003/04 the relation was still 157 to 198 and 227 (bmwf, 2008a, p. 137). At the time, some universities had already stopped any new enrolments to Diploma degrees (ibid., p. 136). Because the Diploma degrees can be completed within an appropriate timeframe, in addition to having the option to transfer from an initiated Diploma degree to a newly established Bachelor degree course, a certain kind of duality is expected to continue for some time, between graduates from “old”, or traditional degree courses and those from “new” degree courses, which comply with the three-tiered Bologna structure.

Moreover, there will continue to be a range of combinations of studying and working: Bachelor, Master and doctoral degrees completed back-to-back; alternating phases of either exclusively studying or working; various manifestations of “students who are gainfully employed” or “gainfully employed persons who study”. No doubt, the heterogeneity of forms of studying and of transitional forms will provide a number of challenges for the institutions in the tertiary educational sector – keyword “job-accompanying courses of study”, but also new forms of “blended learning” and “e-learning”.

In order to identify key features of the new academic degrees, as well as distinctions with the traditional degrees, selected results were presented in this paper – for the most part from the perspective of a comparison of the new Bachelor degree at universities and universites of applied science with the traditional degrees (*Magister*, *Diplom* and *Dipl.-Ing.*) of these types of higher education institution. In some instances, this comparison revealed fewer differences between types of degree than between types of instution.

Two prominent objectives of the Bologna Process, namely the encouragement of international student mobility and the promotion of employability, are the focus of this presentation.

[12] Institut für berufliche Weiterbildung (ibw)

What promotes and what impedes student mobility? Some of the newly established degrees or degree programmes include periods abroad for study or training purposes to a greater extent (see Wirtschaftskammer Österreich & Bundesministerium für Wissenschaft und Forschung, 2010, p. 4), and at the individual universities special units provide relevant support to students. The European Credit Transfer System should ensure that the mutual recognition of academic performance (comparability of *workload* or *grades*) gradually becomes less of an issue. However, experience shows that there is still room for improvement and – as our data illustrate – study-related periods abroad are still more of an exception than the rule.

What promotes and what impedes employability, at least after the first cycle (Bachelor level)? On the whole, the Austrian university graduates involved in the ARUFA study seem satisfied with their studies and the associated conditions; a few aspects (such as under-developed job-related elements in the degree, or a lack of awareness about course content) appear to justify criticism. Job satisfaction also appears to be very high – however, we are not in a position to establish a truly "objective" picture based on a survey of students or graduates (it is also possible that respondents have few expectations or a low level of requirements). As far as horizontal (usefulness of qualification) and vertical (adequacy of degree) fit are concerned, no significant problems were revealed; only to a limited extent are Bachelor graduates worse off here with regard to other criteria relating to (emerging) professional success.

Measured against the expectations aroused by the public discourse we find relatively few differences between "traditional" (*Magister*, *Dipl.-Ing.*) and "new" (Bachelor) degrees, nor do we find disadvantages for the latter – depending on the anticipatory attitude, this result may either disappoint or satisfy. We do, however, identify clear differences between the types of higher education institution – which may be largely due to the divergent tasks with which they are endowed (greater scientific or basic research orientation at the universities versus a more pronounced practice and application orientation at UAS) and which may also be ascribed to varying conditions ("open admission to higher education", in part "mass studies" or "admission", "university place management").

Further analyses, for example grouped by fields of study or by strongly represented single degrees or degree programmes, appear to be an obvious next step, and can very well be conducted with the data at hand. A greater level of differentiation by year of graduation would be meaningful in this context. Certainly, the different cohorts face somewhat changed conditions in the (academic) labour market; and certain aspects of gainful employment only become visible in the system of organised occupation after a certain lapse of time.

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